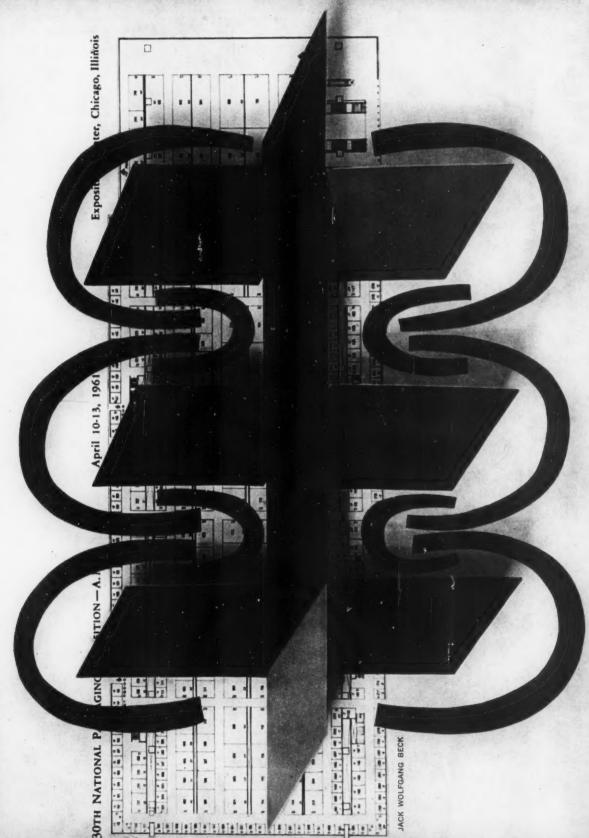
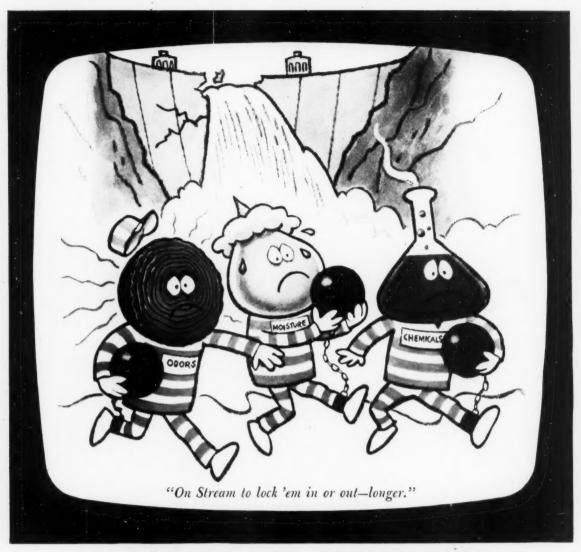
MODERN PACKAGING



SHOW ISSUE / APRIL 1961



14,000,000 LBS. RESYN® 3600 POLYVINYLIDENE CHLORIDE LATEX FOR PROTECTIVE COATINGS

Our 14,000,000 pound RESYN 3600 'plant is now "on stream" at Meredosia, Illinois. This marks the first commercial production of National's water dispersed polyvinylidene chloride and brings combined capacity at Meredosia to more than 80 million pounds of polymer emulsions and latices annually.

RESYN 3600 promises a revolution in protective coatings with simple low cost application by high speed coating machines or spraying. Its barrier properties are exciting and exceptional:

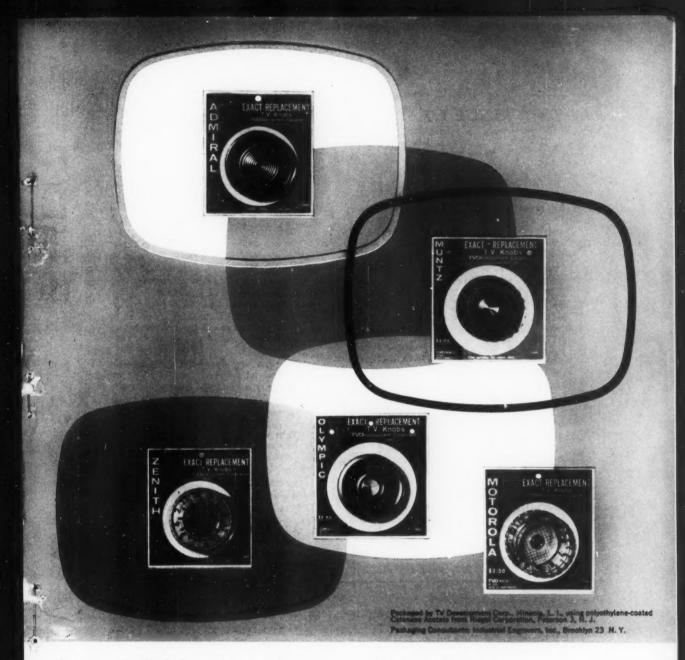
MOISTURE-Moisture vapor transmission is 21/2 to 5 times lower than that of polyethylene. ODORS-Resistance to

transmission of common gases 1000-2000 times greater than polyethylene. CHEMICALS-Almost complete non-reactivity to concentrated acids, solvents, alkalies and other corrosive materials. Completely resistant to grease and oil. Fire retardancy is excellent.

RESYN 3600 can be coated on paper, paperboard, plastic and other substrates. It also may be applied to fibers. It is of interest to a broad range of industries, including food and other types of packaging, converting, chemical, and textile. Call or write your nearest National office for full information.



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for a bright sales picture...SKIN-PACK with Polyethylene-coated Celanese Acetate

The economical skin packaging of larger heavier items is now possible through the development of a new thermoforming film made by coating acetate film with polyethylene. This combination material is tough, as well as transparent. It produces packages with superior strength and excellent shelf life. It solves the problem of safe packaging for hardware, tools, machine parts, and other items of complex shape.

IMPROVED ADMESION TO BOARD. Polyethylene-coated Celanese Acetate film eliminates the need for perforated or treated board. Bonding is improved. The superior thermoforming characteristics of this film combination result in excellent drawdowns around the item without webbing or tenting. Deep draws are possible, thus

increasing the variety of products that can be packaged.

ECONOMICAL. Skin packaging this improved way eliminates molds, attachment hardware, and fabricating and filling operations. Equipment for in-plant packaging can be set up at minimum expense – far less than that required for blister packaging.

Celanese does not supply polyethylene-coated acetate film. It is produced by a number of converters, and available from them. For names of converters in your area write: Celanese Plastics Company, Dept. 208-D. 744 Broad Street, Newark 2, N. J. Celanese 8

Celanese Plastics Company is a Division of Celanese Corporation of America.

Canadign Affiliate: Canadian Chemical Company Limited, Montreal, Toronto, Vancouver.

Export Sules: Ameel Co., Inc., and Pan Ameel Co., Inc., 180 Madison Ave., New York 16.

MATERIALS FOR Colonese MODERN PACKAGING

IN THIS ISSUE OF MODERN

APRIL 1961 / VOLUME 34 / NO. 8

145 Effective package copy

In the silent struggle for consumer acceptance and brand supremacy, no area of packaging is more vital or demands more skill in planning than does effective descriptive matter—the "small type" on back or side package panels. It can make or break a product. Here's a report on new techniques for handling such copy, along with case-history examples from some of the nation's most successful package users.

General interest.

152 Faster form-fill-seal

Now running at Seabrook Farms' plant is a form-fill-seal machine that brings greater speed, efficiency and flexibility to the packaging of loose-frozen vegetables in polyethylene bags. A rocking drawbar jumps speeds to 50 bags per minute; an adjustable drive linkage simplifies change-over from 1½-lb. to 2-lb. film bags. A production-methods article.

155 Food Law under moratorium

March 6 deadline passes without final action by Congress on a bill to extend the legal deadline for compliance with the 1958 Food Additives Amendment. But F&DA promises no prosecutions in the meantime; pending tests and extension requests are given a 39-month grace period. Special interest: foods, dengs.

FRONT FEATURES

- 39 Background for Packaging Capsule comments and notes on significant news.
- 72 Equipment & Materials Important new products from suppliers.
- 103 Sounding Board

 We ask the readers: How are you meeting
 in-plant maintenance problems posed by the
 complexity of high-speed automatic equipment?
- 125 World Report What's news in foreign packaging magazines.
- 143 Editorial Memo
 "For value to be received."

156 Wrap-up for glass

Brewers and bottlers, who have already benefited from the one-trip glass container, are reaping further cost savings via economical in-plant six-pack banding that facilitates bottle handling both for the supplier and the packager. It is a trend that promises fundamental changes in glass-container shipping practices. A production-methods article.

Besign confirmed by research
Behind Bauer & Black's tasteful new line of
packages for elastic goods—revamped to satisfy
a 10-point checklist of self-selection values—
is a careful two-year project in which outside
consumer research was employed to verify an
independent designer's recommendations.
General interest.

163 Thin skin that's tough

New converting techniques enable shrinkable polyester film to be prefabricated into low-cost skin-tight bags. B. J. Price, a pioneer user, finds that the bags defy breakage and double the shelf life of processed meats.

Special interest: foods, self-selection items.

168 Aligned by magnetism

General interest.

Possibilities for any ferrous-metal product that can benefit from lengthwise alignment in the package are suggested by a new principle of arranging and loading nails. As used by American Steel & Wire, it involves magnetic alignment of nails (permitting a box of smaller cube) and a new, ingeniously set-up corrugated container. A production-methods acticle.

- 173 Folding-box winners for '61
 Steadily rising quality and healthy diversity in graphic and construction techniques are evidenced by 100 winners in Folding Paper Box Assn.'s annual Folding Carton Competition. Half the awards go to traditional-style cartons.
- 182 Upgrading the 'unpackageable'
 Signifying the low-cost performability of modern packaging materials, two construction products usually marketed in non-packaged form—fine lumber and top-quality sheet steel—now are

MODERN PACKAGING, Executive and Editorial Offices, 770 Lexington Ave., New York 21, N.Y. Phone PLaza 9-2710

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New

PAGKAGING

THE COMPLETE AUTHORITY OF PACKAGING

shipped in protective wraps that cut damage claims while adding new merchandising appeal. Special interest: industrial products.

- 188 A new setting for the Packaging Show
 The 30th AMA National Packaging Exposition and
 concurrent Packaging Conference are ready for
 Chicago's McCormick Place, April 10-13. A 10minute ride from the Loop, this mammoth new hall
 will house all exhibits on one floor. (Guide to
 the Show and Conference inside front cover.)
- 191 How GM uses blister packs
 The world's biggest manufacturer finds that semiautomatic machines are best for blister packaging
 of spark plugs and small parts. Two different
 machines are used: a former-sealer for Buick
 replacement parts and a unit that packs AC spark
 plugs in carded, pre-formed acetate blisters.
 A production-methods article.
- 91 Window carton with a door Paul Masson Vineyards solves the problem of gift display for wines and liquors via a simple window carton with a fifth panel which is folded over the window and tucked in during shipping, then opened by the dealer to display the bottle. Special interest: sales, advertising, designers,
- 98 The first polypropylene tube



Promising application to many grease-containing products, polypropylene makes its debut in the squeeze-tube field as the container for Melissa's make up cream. The

plastic was chosen for its properties of grease resistance, fragrance and moisture retention. low cost, light weight and printability. Special interest: foods, drugs, toiletries, all viscous products with oil or grease content.

Research proposal at Michigan State MSU's School of Packaging offers industry the opportunity to join in multi-sponsor projects covering six areas of packaging. Research findings will be made available to sponsors.

TECHNICAL & ENGINEERING

- Machine studies by camera
 With modern high-speed printing and packaging machinery, it is often impossible to pinpoint the source of production-line problems. But an equally modern development—ultra-high-speed cinematography—expands a fleeting fraction of a second into several minutes' viewing time so that mechanical details can be studied at leisure, By J. A. Cairns and J. Salisbury.
- 209 **Stripping can coatings**Here's a report on an improved, faster method for removing organic finishes so that the weight of the tinplate itself can be determined. It involves an aniline-based stripping mixture that removes coating in minutes without affecting the tin. By Charles H. Coleman and John E. Despaul.
- 213 Improved closure of flexible barriers
 The big problem in flexible barrier packaging
 has always been seal weakness—usually less than
 50% of the tensile strength of the material. Now
 a rounded-jaw heat sealer is shown to increase
 seal efficiency to 80%. By Howard W. Christie.
- 222 Questions & Answers Solutions to readers' technical problems.

DEPARTMENTS

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 The why and how of out-tanding packages.
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 - B Index to Advertisers
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New Wrap-King CKM-3 Straight Line Wrapping Machine handles ANY Film including Reynolon, Vitafilm, Saran, Cryovac L-500 and XL-500

Shrink films with their soft, limp qualities and crisp, sparkling cellophane are all the same to the new CKM-3 Straight Line Wrapping Machine. Now you can use the ideal film for your product... the one with the most favorable rate of transmission of moisture and oxygen... the one that adds most to the appearance of your product... the one that is most economical for you. This latest development of Crompton & Knowles specialized engineering feeds, wraps and seals them all. And its straight line construction — the longitudinal axes of the discharge and infeed conveyors on one line — makes for simpler, more efficient operation and economical use of space.

The CKM-3 handles film rolls up to 13" wide. It wraps Rounds: 3" to $4\frac{1}{8}$ " in diameter; Squares: 3" x 3" to $4\frac{1}{2}$ " x $4\frac{1}{2}$ ";

Rectangles: $3'' \times 3'' \times \frac{1}{2}''$ to $6'' \times 4\frac{1}{2}'' \times 2\frac{1}{2}''$.

CKM-3 is Fast and Adaptable

The CKM-3 wraps 60-80 packages per minute depending on the film used. All controls are in full view on a central panel for easier, more efficient operation. Parts are reached quickly and easily for cleaning or adjusting. Size changes are simple to make. Bunch fold parts can be provided for all plastic films. Modified die fold parts are available for most films.

For complete details on the new CKM-3 Straight Line Wrapping Machine, including leasing arrangements, write Wrap-King Division, Crompton & Knowles Packaging Corporation, Holyoke, Mass.



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SEAMLESS CROWN AEROSOL SPRA-TAINERS



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Highly delicate products that once were impractical for aerosol cans are now packaged effectively in Crown Spra-Tainers. These unique aerosol cans have no side seams or shoulder seams. They permit greater propellant pressure . . . protect delicate and fragrant products better than any other aerosol container available. Crown offers a complete line of both seamless Spra-Tainers and Fabricated Aerosol Cans . . . for every type product. Call on Crown—the originators of pressure packaging.

Your Packaging Deserves Crown Quality

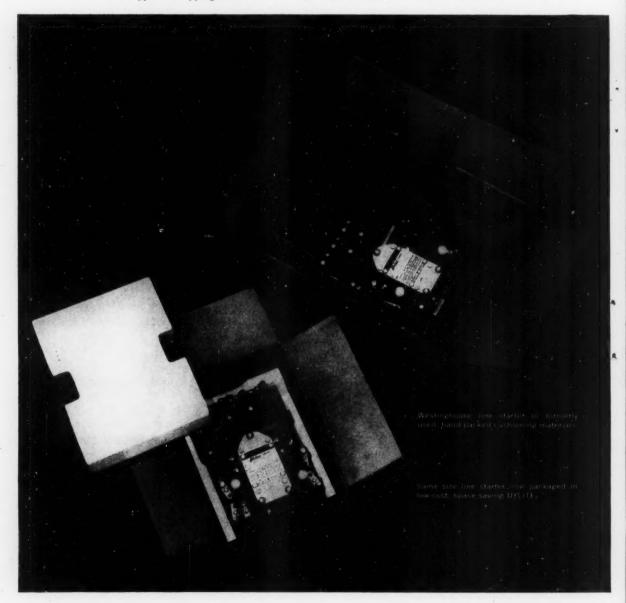
CROWN cans · crowns · closures · machinery CROWN CORK & SEAL CO., INC., 9300 Ashton Rd., Phila. 36, Pa.

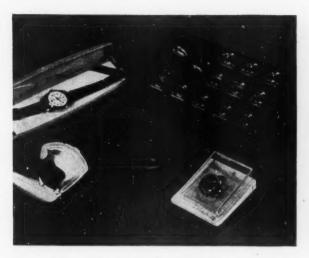


Westinghouse cuts package size in half

This Westinghouse motor starter is cushioned in pads of DYLITE® expandable polystyrene. DYLITE pockets this delicate instrument better than previously used molded pulp and corrugated boxboard materials. It enables Westinghouse to cut their package size 50% . . . and reduce material, labor and shipping costs.

A DYLITE package is extremely lightweight . . . it's easy to pack and load. This amazing plastic is waterproof, non-dusting and it's an excellent thermal insulator. DYLITE can be molded easily to almost any size or shape. It can be colored and decorated, too. Use it as a cushioning material in all types of shipping containers. DYLITE parts molded by Expandable Plastics Corporation, Akron, Ohio



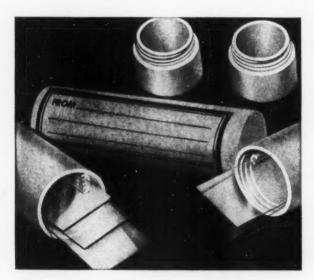


Jewelry cases with display appeal

Quality products deserve an individually tailored display case to compliment their beauty and value. These attractive Rocket jewelry cases provide such sales appeal.

The cases are molded from Dylene® polystyrene, a Koppers plastic that is ideal for packages demanding dimensional stability, protection and precision engineering. Dylene has inherent strength and impact resistance. It permits a variety of surface textures, colors, shapes and molds easily for unlimited packaging applications.

DYLENE cases manufactured by Rocket Jewelry Box Co., New York 51, N.Y.



Container keeps glass slides safe

You can drop this SUPER DYLAN* container on a concrete floor and the glass micro slides inside won't break. Precision-molded grooves hold the slides firmly in place; the heavily-threaded cap screws tight preventing the slides from moving up and down. The container is lightweight, attractive and rugged. It won't chip or dent.

This SUPER DYLAN high-density polyethylene container needs no interior cushioning materials. It's convenient to store, easy to ship; it cuts mailing costs. And because this plastic is heat resistant, the container can be sterilized and reused. SUPER DYLAN containers molded by Monrovia Plastics, Monrovia, Calif.



New cap has a "snip-off" tip

With this new DYLAN® polyethylene cap, housewives just cut off the tip and get a measured flow of Liquid Lux with every squeeze of the bottle. It eliminates bothersome measuring by capsful. The new "snip-off" cap tightly grips a threaded neck on the plastic bottle...no drips, no leaks.

DYLAN polyethylene has a smooth, glossy finish. It won't chip or dent. DYLAN is durable, lightweight, rust-proof, and has good chemical resistance. It molds easily to any size, shape or color closure. This versatile plastic adds consumer appeal to the top of any detergent, cosmetic, food, chemical or pharmaceutical package. DYLAN caps molded by Augusta Plastics, Inc., Bronx, New York - Formold Plastics, Blue Island, Ill. - Gibson Associates, Inc., Cranford, N. J.

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"VERSATILITY in Packaging" is a phrase that becomes meaningful when you analyze the examples shown here!

The instant milk product demanded a combination of product protection and sales glamour. *Marathon had the answer:* a laminated Glamakote—paper—polyethylene—foil wrapper, beautifully printed

in 5-color rotogravure, providing strength, machinability and positive heat seal; an inner carton of solid bleached paperboard accurately die cut and scored to assure high-speed filling and closing; a built-in Tayco bridge to prevent carton bulging.

A gum wrapper sounds simple. Yet it requires high-speed letterpress printing of up to 196 design combinations in a single run! It also needs a specially formulated wax coating to meet the demands of heat sealing equipment wrapping small units at extremely high speeds. And again, Marathon has the answer. Marathon, A Division of American Can Co., Menasha, Wis. In Canada: Marathon Packages Ltd., Toronto 3.



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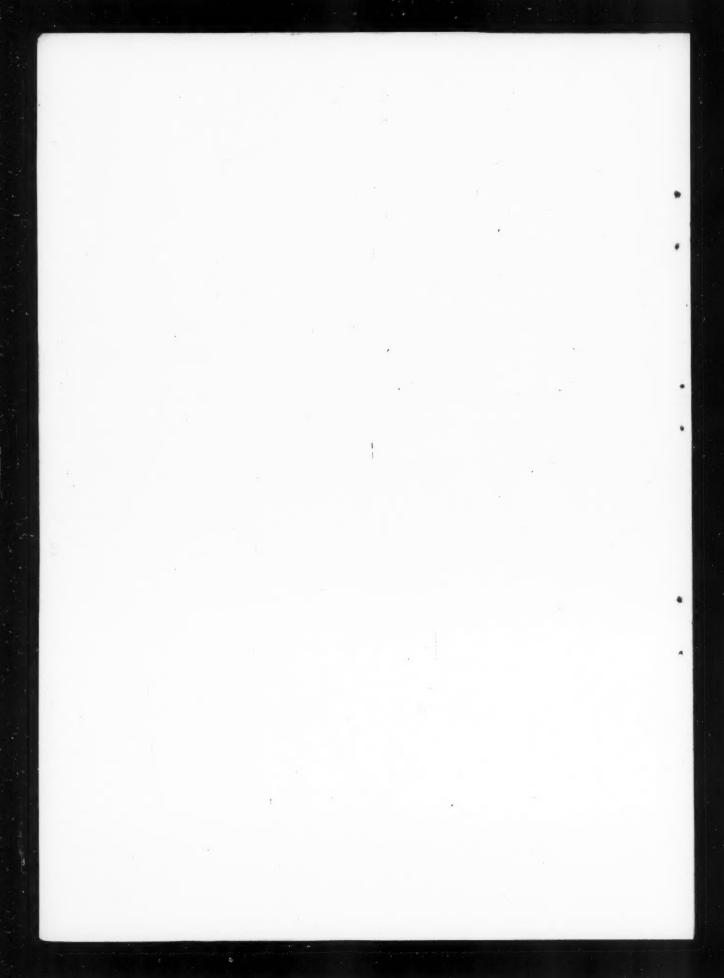
Aluminum foil packaging excels in enhancing a product's Quality Image . . . whether by outshining beauty or superior protection or both. And Reynolds excels in aluminum packaging . . . including the finest gravure printing. To help you reach wise packaging decisions for your product's Quality Image, call any Reynolds sales office. Or write Reynolds Metals Company, Richmond 18, Virginia.



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Junket package designs by Jim Nash Associates.





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focuses attention on Ansco cameras!

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Phone: WYman 1-0980 New York: BArclay 7-6421

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a cellophane that is completely impervious to grease?

a cellophane that gives tough, tight wraps for the largest, boniest cuts of meat?

a cellophane that keeps cupcakes, pound cakes and jelly rolls fresh 12 days instead of 7?

a cellophane that stays clear and sparkling under constant refrigeration?

a cellophane that assures maximum resistance to cockling?

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Strong claims? Of course, but each is backed by exhaustive laboratory tests or actual customer reports.

And we're working constantly to develop other new cellophanes to give your product maximum protection and sales appeal.

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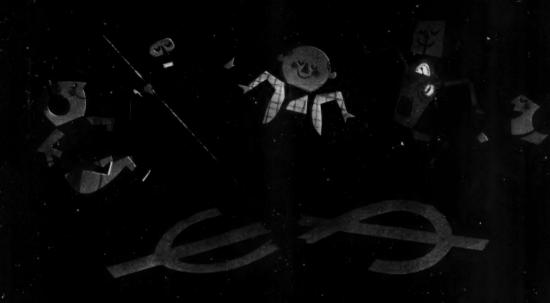




is readily adaptable to high-speed packaging machinery.

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NO HUSTLE or bustle for happy-golucky Mr. Snail! He takes his jolly good time, safe and snug in his shell—a container that does what it's supposed to do ... best!



New products, packages and profits!

Canco develops the containers that do what they're supposed to do . . . best! Not by hit, miss or guess, but by completely understanding a manufacturer's product and his packaging problems. A timely example is Canco's new, popular "String-Pull" Biscuit container that provides easier opening and greater product protection. Another example could be a new package for your products. In laboratories, test kitchens and factories, Canco specialists are right now solving packaging problems like yours.

For greater profits put Canco's research, manufacturing facilities and aggressive marketing team to work for your products.

Be sure to visit Canco's exhibit, Booth 360, at the Packaging Exposition in Chicago.

GREAT CONTAINER IDEAS COME FROM



CANCO DIVISION

AMERICAN CAN COMPANY



A market researcher is a detective and Grace market research people are good detectives. If you need the facts on a plastics market, a potential demand, a trend... call Grace. The Grace Service Plan offers market research as one of ten major services available to Grace customers. On market research problems, it costs no more to call for that extra touch of Grace.

W. R. GRACE & CO. POLYMER CHEMICALS DIVISION, CLIFTON, N. J.
HIGH DENSITY POLYETHYLENE, LOW AND MEDIUM DENSITY POLYETHYLENES, POLYSTYRENES.



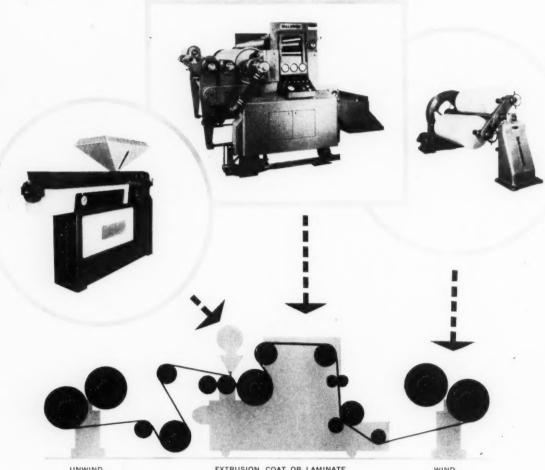




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New Machinery Designs with New Features for **EXTRUSION COATING & LAMINATING**



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Manufactured in a complete range of sizes by combining our standard units. Buy from a single responsible source, technically competent in web processing and extrusion machinery.

Write for complete specifications and information on the new operating features built into these units.



WALDRON • HARTIG DIVISION MIDLAND-ROSS CORPORATION BOX 791, NEW BRUNSWICK, N. J.

Riegel

Creative Climate for Tomorrow's Packaging



RIEGEL PAPER CORPORATION, 260 MADISON AVE., NEW YORK 16, N. Y. Specialist in the packaging of foods, drugs, and soft goods
Flexible packaging...carton board...folding cartons...carton liners

Riegel carton liners protect the crisp goodness in Kellogg's cereals

Riegel, a volume producer of carton liner material, tailors its papers to meet Kellogg's specific protection needs.

Customer loyalty is a valuable asset... and the people who guide Kellogg's protect theirs carefully. One custodian of this loyalty is the special Riegel carton liner that maintains the crisp goodness of Kellogg's cereals.

We've a flair for thinking of your product as something special, too, and developing for it the one best answer, be it pouch paper, glassine, foil, film, or combination ... printed, coated or plain. Write for more information today ... for the new ideas come from Riegel.

Specialty Products Division RIEGEL PAPER CORP., 260 Madison Ave., NYC 16 Flexible packaging materials for foods, drugs, chemicals

Riegel

PRODUCTS

A sales building idea for Brown's Hosiery Mills from Lassiter...the soft goods specialist

New "Poodle Set" package shows Lassiter carton design skill at work . . . 3 related children's items book-packaged to promote higher unit sales.

Group packaging to promote higher unit sales is a problem that Lassiter has solved many times over. As the leading specialist in soft goods packaging, we understand both sales and production problems...and we know how to create a package that will catch the eye, promote sales, and maintain production efficiency.

This kind of practical creative packaging...choosing from a wide variety of materials...can help you. May we lay the world of design at your feet? Write today.

Lassiter Division RIEGEL PAPER CORP., 350 Fifth Ave., NYC 1 • Charlotte 4, N.C. Specialists in soft-goods packaging. Designers and producers of film, foil, paper and paperboard packaging, inserts, riders, labels, bands and tags A DIVISION OF Riegel

Riegel Foldcote: So strong it saves the cost of metal cutter

The Foldcote carton board itself is the cutting edge in this Tidy Home aluminum foil package. Offset printed in two colors.

For noticeably stronger, brighter cartons . . . Tidy House Paper Corporation of New York uses Riegel's outstanding new carton stock . . . Foldcote™. Super-white for color brilliance, super-smooth for high-fidelity reproduction . . . superstrong for a rugged, rigid package that keeps that clean look.

You too can have a brighter future with Foldcote. Ask for samples and information. Ask too, about other Carolina solid bleached boards. Export inquiries also invited. See Riegel ... for the new ideas come from Riegel.

Carolina Division

RIEGEL PAPER CORP., 260 Madison Ave., NYC 16

"Foldcote" machine-coated bleached board

"Albacel" and "Astracel" pulps



CAROLINA Division

aluminum fo

Home Home

Distinction for Borden's: a new "golden look" with a Riegel carton top

Slip-on carton "hood" . . . gravure printed in gold on Riegel Foldcote™. Hood fits both steeple and flat-top containers . . . holds instruction folder.

This sparkling gold hood creates the right atmosphere for acceptance... gives quick identity to Borden's fast selling Ready Diet. Die-cut side panels lock snugly over standard

steeple or flat-top containers, hood holds an instruction folder.

This same sales-ahead folding carton service is ready to help you. Riegel's modern carton plants . . . North and South . . . offer design services and full choice of printing processes, coatings and finishes. A brief talk will fill you in. Just say when.

Folding Carton Sales RIEGEL PAPER CORP., 260 Madison Ave., NYC 16 Folding cartons of every description. Counter display cartons. Egg cartons. Riegel FOLDING CARTONS CHOCOL FLAVORED HOMOGENIZED

"A better package, at lower cost" ...why Smith-Gates likes Riegel Skin-Pak system

"We have found that by use of your machine we not only lead all competitors in product presentation but also have improved our factory costs and reduced packaging time."

Moving to the front with new self-selling hardware techniques, Smith-Gates Corp. chose Riegel DrapexTM, a new super-strong vacuumizing film, teamed with Riegel Skin-Pak automatic machines. Result: leadership.

Drapex is glossier, longer lasting, more puncture resistant ... so strong you use a thinner film, with big savings in heating time and material cost. Seals directly to uncoated, unperforated board.

Try Riegel Drapex. Send your product today for free test packaging . . . for the new ideas come from Riegel.

Skin-Pak RIEGEL PAPER CORP., 143 E. Railway Ave., Paterson 3, N.J. "Drapex" film and machinery for skin packaging



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Ideas in automatic packaging equipment.

Bartelt Engineering Company will be un
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WHEN: April 10 through 13
WHERE: Lake Front Exposition Center,
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BOOTH NO. 436

BARTELT

Bartelt Engineering Co., Inc.

Subsidiary of Riegel Paper Corporation 1900 Harrison Ave. • Rockford, Illinois New York • Chicago • San Francisco



CONVENIENCE PACKAGE FOR BESSEY'S. For many consumers, convenience in larger glass jars means a bail handle for carrying. So this Armstrong design started there . . . and with the wide mouth for easy pouring. But no reason why a handy package shouldn't be good looking, too. Thus the handsome diamond design to get attention and flatter the contents. Add the smooth running on the Bessey filling line, and you have a sweet package for cider.



Armstrong PACKAGING

Background for Packaging

Changing influences in supermarket merchandising should be noted by all packagers who have a stake in this vast market. Several observers have commented recently on the growing influence of the individual store manager. Central buying offices still make the purchase, but they listen more and more to the men in the field—the store manager and his selling experts—as emphasis shifts to stronger selling. E. B. Weiss of Doyle Dane Bernbach advocates a program of direct calls on 2.000 key stores (including discount chains and department-store branches) which aggregate \$15 billion and handle from 15 to 35% of total volume of many packaged products.

The push for profits in today's buyer's market should concentrate not alone on production efficiencies in packaging, but equally on product protection, to cut damage and waste, and sales stimulation to produce the profitable higher volume. Packaging, both consumer and industrial, will be critically analyzed by manufacturers during 1961 for its total contribution to profits, says Norman H. Stone of Stone Container Corp.

There is a growing feeling that marketing, with today's heavy emphasis on lengthy consumer testing, may be getting a bit over-cautious on new products and new packages. Is it really necessary to test market for as long as two or three years? In the present situation, the consumer market is crying for stimulation and, in the opinion of some marketing authorities, manufacturers who move boldly in the face of greater risk will have the chance for greater gain. A policy of "waiting for business to improve" may possibly result in missing the boat.

Look at cellophane, growing bigger every year in the face of competition from polyethylene and other plastics films which now have a price advantage. Cellophane in 1960 had its third record year in a row, with sales up to 439 million pounds. All industry can take a lesson from the cellophane makers, who have overcome the cost-price squeeze by research and improvements to achieve a hard-to-beat balance of desirable properties for given applications. Machining problems still handicap soft plastic films.

Novel application of blister packaging, actually outside the packaging field, has angles of interest. A West Coast company has developed a small, portable blister-packaging machine (see p. 252, this issue) which movers take into the house to secure small, breakable items on coated-corrugated backing with stretch film. Movers report it cuts labor expense, reduces claims and builds customer satisfaction. A simple, portable machine of this type (it handles items from pins and needles up to 13 by 17 by 6 in.) could have many uses in small, diversified packaging plants.

New twist in polyethylene is attracting the attention of bread bakers. Several brands of sliced bread have deserted wraps for polyethylene bags, which are simply closed at one end with a twist or tape tie; this provides an easy reclosure for moistureproof storage of unused slices. Bags are filled by automatic loaders and it is reported that more than 35 such machines were sold in Texas alone over a 90-day period.

Color preferences of American consumers are shifting from light pastels to sharper and brighter colors, says Faber Birren, a leading color expert and consultant to Sun Chemical. Calling this a major color transition, such as has occurred periodically through the years, Mr. Birren points out that it can have an enormous effect on packaging, ad- [Continued on page 42]

Notes, quotes
and comments.

An editorial
feature



FANCY FREE

THE BALANCED PERMANENT WAVE BY HELENE CURTIS



new twist for a hair-do with

...BRITE-PAK ENAMEL COAT

A proud, perky package with an attractive, snowy-white interior enhances the feminine appeal of Fancy Free, the new professional balanced permanent wave by Helene Curtis. This is another reason so many smart women find Fancy Free hard to resist.

The Fancy Free package . . . beautifully produced by one of our customers . . . uses Brite-Pak Enamel Coat bleached board to obtain the extra sparkle—inside and out—that means so much in sales.

Enamel Coat's smoothly gleaming surface is unsurpassed for fine, full color process printing and for brilliant illustrations. Yet, it is truly economical.

To see how Brite-Pak Enamel Coat can help you upgrade your packaging, write to Bleached Board Division, West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, N. Y.



West Virginia
Pulp and Paper

Background for Packaging

vertising and merchandising. Predicted as the most marketable colors by 1970: bright flame red, bright tones of blue, emerald green.

A promising move toward bringing order out of confusion in F&DA food-additives compliance is a proposal for standardized extraction tests acceptable to F&DA. The American Society for Testing Materials Committee F-2 on flexible barrier materials met with Government and industry representatives last month at Michigan State to draw up proposed standards. Determination of extraction is essential to food-packaging materials; if a chemical does not migrate to the product, it is not a food additive under the law.

Significant trend is developing in imports of Scotch whisky. Few realize that an increasing amount of Scotch is being bottled in this country from bulk imports. In the first eight months of last year, bulk imports rose by 68% over the previous year, while bottled imports went up only 13%. Economies in shipping are such that many more good Scotches are now available here at around the \$5 price level. Scottish bottle makers, label printers and shipping-case manufacturers are understandably unhappy about the trend, but it means more business for U. S. packaging—and the idea is apt to spread to other imported products.

Blow-molded bottles are likely to double their consumption of plastics during 1961, according to projections by Hercules Powder Co. Greatest gains are looked for in high-density polyethylene, but polypropylene is expected to become a factor this year. A new aspect is a mechanical development which, according to Hercules, enables the manufacture of multicolor bottles in both polyethylene and polypropylene blown shapes.

The beauty bar opens a new opportunity for mass marketing of beauty aids in supermarkets. Potential volume of specialized food-store make-up departments is estimated at \$160 to \$250 million. A leader is Chesebrough-Pond's, which provides a pin-up rack and a selection of pre-priced, blister-packaged lipsticks, powders, eye make-up kits, etc., at an average price of \$1 per item. Chesebrough is reported to have set up some 200 racks. Next step will be use of demonstrators to offer advice and build traffic.

Something new in frozen foods is a trend toward frozen dinners that can be taken home hot, ready to serve. Home Chef, Inc., of Yonkers has just opened its third store in the New York area. Essentially, it's the old "TV dinner" idea, but with the added feature that trayed dinners (or baskets of shrimp or fried chicken) are taken from the store freezer and heated on the spot, in a matter of minutes, in a microwave oven. This development is a significant extension of the packaged institutional-meal concept to the corner-delicatessen level.

Beer from a slot machine? It's being tried in Canada and, according to Marketing, the machine is successful in pouring draft beer to exactly the same level in every glass. Principle is similar to that of U. S. soft-drink machines dispensing refrigerated drinks into paper cups. If widely accepted, it might reverse the long-time trend from draft to packaged beers.

Rack jobbers are happy over their strengthening position in merchandising of non-foods in chain stores. Concensus at recent Chicago convention of American Rack Merchandisers Institute was that an incipient trend toward direct buying of non-foods by some large food chains had been checked last year. Jobbers now have their eyes on variety chains. Biggest packaging headache is toys, with high damage ratio.

SEAGRAM TAKES THE LEAD in bottling efficiency



- going full tilt an outstanding and highly practical innovation in distillery production.
- ▶ For feeding, cleaning, filling and capping, Pneumatic's engineers have incorporated in their latest designs—represented
- in Seagram's synchronized line versatility that has broken through many previous production barriers for good. You, too, may uncover truly surprising opportunities to effect definite savings with modern Pneumatic equipment.

First to use most advanced methodsSpeeds increase and costs go down

Synchronized bottling line now installed at Lawrenceburg plant of Jos. E. Scagram & Sons, Inc.

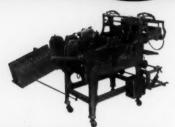
- ▶ Seagram, as everyone knows, is a "big demand" brand one of the great names in whiskey in this country. Its annual volume leads in its industry. It naturally follows that its plant facilities must be kept up-to-the-minute to meet the demands of Seagram's national distribution and its exciting promotion and selling.
- Living up to its leadership-reputation, Seagram was the first to order and install, in its Lawrenceburg, Indiana plant, the most advanced equipment for high speed cleaning, filling and capping that Pneumatic—or any other machinery builder—has ever developed. Bottling operations on this equipment reach a peak of speed and efficiency never before matched in any automatic line. Cleaning and capping machines are fully synchronized to an amazingly flexible, speedy and smooth running filling unit. A rotary machine with 40 heads, it adjusts readily to any filling height while

Synchronized botting line now installed at Lawrencenurg plant of Jos. E. Seagram & Sons, Inc.



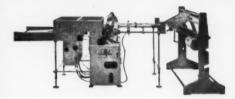
Packaging and Bottling Equipment

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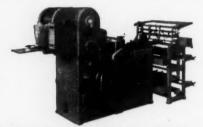
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BAG MACHINES produce bags of finest finish appearance; and with strongest seals. Write for side weld bulletin TDS-100 and conventional machine bulletin SPM-8R.



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NEW 40" WIDE SIDE WELD MACHINE

Split draw roll operation—either one or two webs. Designed for rugged converter use. Bag sizes from 3" length x 5" width, to 40" length x 30" width. Write for bulletin TDS-210.



AUTOMATIC POUCH-MAKING MACHINES

For quality production with heat-sealing laminates for vacuum or for military packaging. A wide variety of attachments available. Write for bulletin SPM-4.



FULLY AUTOMATIC PACKAGING

Simplex-O-Matic combines bag making, weighing or measuring, filling, sealing and check weighing, in one continuous, automatic operation. Write for bulletin SOM-1.





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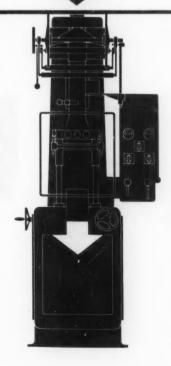
when you buy a Hamac-Transwrap®: Each machine offers you a high degree of versatility, both as to bag sizes and to the different types of feed. Rapidly exchangeable accessories will cope with any product you may require bagging at some future date.

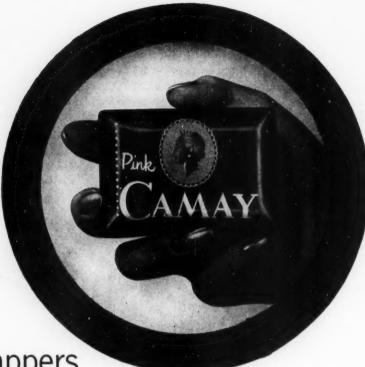
More than 1000 installations operate all over the world handling a wide range of products, using volumetric, auger and pump feeds, as well as semi- or fully-automatic counters and weighers. Each of them is producing up to sixty filled and sealed bags per minute, hour after hour, throughout the whole working week. — Discuss your packaging problems with Hamac-Hansella Machinery Corporation, Grand & Ruby Avenues, Palisades Park, N.J.

Hamac Hansella

Hamac-Hansella Maschinen GmbH, Düsseldorf, Western Germany

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Intaglio-etched Camay wrappers, in the complexion size, come in five different colors,

Millions of wrappers

one set of cylinders

To catch women's eyes and give the product shelf standout, suggest character, quality, P&G prints Camay wrappers by gravure on foil. And gets economy plus efficiency from a single set of Intaglio etched cylinders!

On large runs, Intaglio chrome-plated, deep etched cylinders outwear litho plates or letterpress electros.

Intaglio are specialists in fine quality gravure packaging production on paper, vinyl, cellophane, foil or other materials.

Intaglio is easy to use. We start with your original art and layouts, produce the finest color separations, make fullcolor positives, and etch cylinders for superior reproduction and highest quality.

Intaglio processes the finest packages, labels, and cartons in the business—and processes them better—helps establish identity and sales for some of the most bought packages in the U.S.!

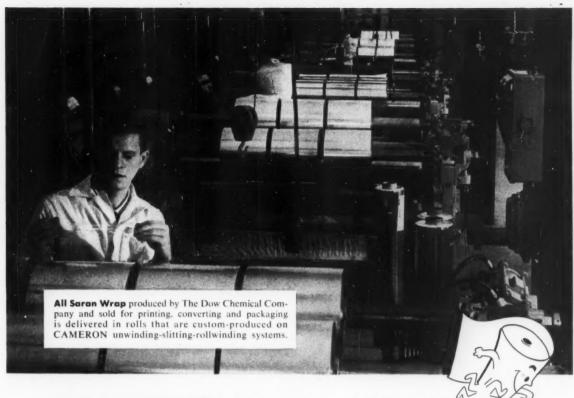
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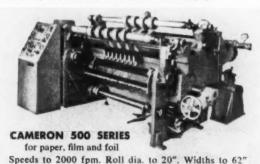


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Changeover slitting from score to shear to razor cut.

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How you can produce The New Roll. Let us test-run your material (paper, film, foil, laminates, etc.) on an integrated, job-fitted pilot unwinding-slitting-rewinding system at our Research and Development Service in Dover, N. J. Write for information.

Roll control on the Cameron 502 starts with an integrated

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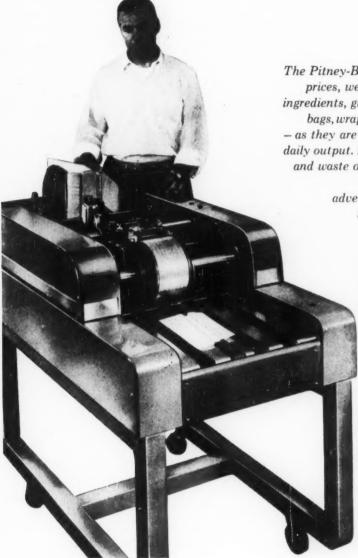


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New, improved, heavy duty imprinter—marks up to 7500 packages an hour!



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The 4800 can also be used to imprint advertising, booklets, envelopes, etc. Offers major savings in costs, time and labor.

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- For details on this amazing new imprinting machine, call any Pitney-Bowes office. Or send coupon for free illustrated booklet and case studies.



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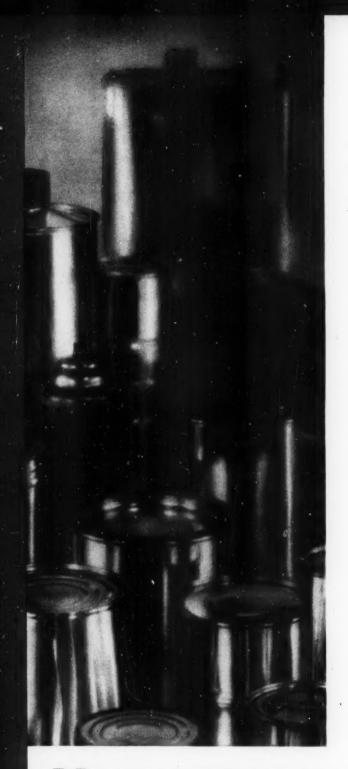
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New additions to Youngstown's No. 2 Tin Mill at Indiana Harbor include:

- The largest, most modern annealing facilities built to date. Youngstown's new No. 2
 Continuous Annealing Line, shown here, has maximum speed of 2000 FPM, producing 60 gleaming tons per hour.
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at % cost of competitive systems

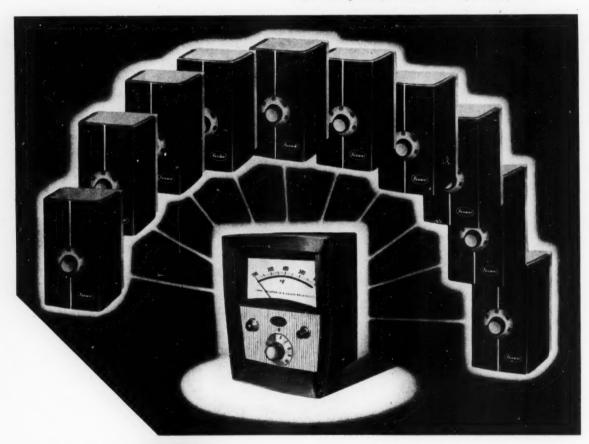
You get then all — wide ranging versatility . . . maximum sensitivity . . . easy installation and servicing! These features combine in a Fenwal 536-580 multi-point monitoring system to give you precise, transistorized temperature control and indication. And you choose the features you need to suit your own requirements!

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Choose from five standard temperature ranges — from -50 to 600°F... expanded scales permit fine temperature adjustments and improved readability, and the entire system gives you sensitivity to within 0.1°F.

Both instruments are smartly styled to perfectly complement modern industrial machines and interiors. A Fenwal engineer will be glad to supply information on this system, or any other temperature control in Fenwal's broad line. Write Fenwal Incorporated, 64 Pleasant Street, Ashland, Mass.



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Take a giant step into aerosol packaging



...it's easy with the help of your contract filler!



Near you there's an aerosol specialist...a contract filler who will take your aerosol from product idea to marketplace. He has an investment in specialized equipment that would cost you tens of thousands of dollars to duplicate and a comprehensive knowledge of aerosol formulation and packaging. He will be glad to put this knowledge and equipment to work for you. The contract filler can get you started in aerosol packaging

without your having to invest a penny in plant, production equipment or specialized personnel!

General Chemical will be glad to put you in touch with capable contract fillers in your area. In addition, as the producer of "Genetron" aerosol propellants, General can provide

valuable marketing information and a wealth of technical data. For full details, just write the General Chem-

ical office nearest you.

genetron
aerosol propellants

Putting the "push" in America's finest aerosols



GENERAL CHEMICAL DIVISION

40 Rector Street, New York 6, N. Y.

An expensive, colorful label must be precision-applied to carry out its merchandising role...

The PONY EXPRESS LABELER

adds maximum display value to your container

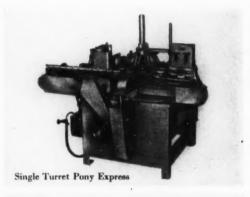


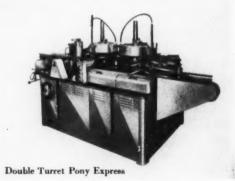
- Exclusive suction label transport system guarantees exact label placement within 1/64" Controlled bottle handling confines each container in a precisely contoured guide pocket A combination of full-surface exposure of the label to the glue applicator plus film gluing through micro-adjustment of the adhesive coating produces edge to edge overall adhesion with no "glue ooze" Center-line label application, and shaped-pressure pad action which assures equal force on each unit of area, delivers perfect register and permanent bond—without air pockets, picker marks, blisters or wrinkles.
- Pony Express is available as a single turret machine for front labeling, or a double turret machine for both front and back labeling. A changeover can be made in 25 minutes on the single turret Pony Express, and in 45 minutes on the double turret machine Base price for the single turret machine is less than \$6,000; that of the double turret Pony Express is under \$10,000.



Labeling, Cartoning
Paper Box Machinery



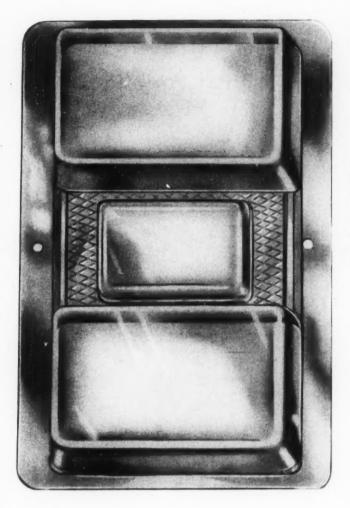


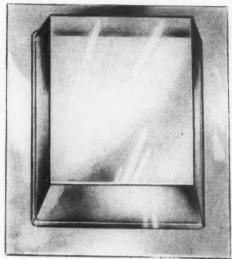


Label	Label up to	Label up to	Label up to
Width	47s" wide	4" wide	3½" wide
Capacity	65/min.	75/min.	80/min.

NEW JERSEY MACHINE CORPORATION

MAIN OFFICE AND PLANT . 16TH ST. AND WILLOW AVENUE, HOBOKEN, N. J. . OLDFIELD 9-0483 FACTORY SALES AND SERVICE BRANCHES; 325 W. HURON ST., CHICAGO 10, ILLINOIS, 2500 W. 6TH ST., LOS ANGELES 57, CALIFORNIA







EXTRUDED VINYL

SHEETING... the newest thing for a protective package that sells

Here's a new development for "see-through" packaging that gives the utmost in protection for your product without sacrificing the visual sales appeal of the product itself. This new Nixon-Baldwin extruded vinyl sheet enables you to form a stable, strong blister package that has the clarity and perfect finish to show quality both inside and outside. It is available in a wide range of widths and thicknesses and in clear transparent, as well as transparent, translucent and opaque colors.

You can see this new extruded vinyl sheet for the first time at the AMA Packaging Show in Chicago. Be sure to stop by Booth No. 276. We will be featuring the extruded vinyl sheet but you will also be able to see cellulose acetate, cellulose acetate butyrate, high impact styrene and calendered vinyl sheeting — all in the usual thicknesses, widths and colors.

Look to the new Nixon-Baldwin for plastic sheeting that will add sales appeal to your product packaging.

nixon-baldwin chemicals inc.

NIXON, NEW JERSEY



If you've been frustrated by film seals that fail, try "SCOTCHPAK"—used by American Cyanamid for safer, more efficient packaging of their new Surgilope SP** sterile suture packs.



*Reg. Trademark-American Cyanamid Co., Surgical Freducts Div.

The dependable seal of "SCOTCHPAK" gives a "go" signal to packagers who have been stopped by film problems. "SCOTCHPAK" is made differently than any other film on the market. It's specially tailored by 3M with the strictest quality-control supervision. It heat-seals easily at 300° to 400° F., 20-60 psi pressure, making a seam that is as strong and impermeable as the film itself. "SCOTCHPAK" stays strong and pliable, too, at temperatures from -70° F. to 240° F. If you don't feel safe with other films you've tried, it's time you learned about "SCOTCHPAK." We will be happy to send you samples and work with your packaging people. Write or call Film Products Group, 3M Company, 900 Bush Avenue, St. Paul 6, Minn. Dept. ICA-41.

MINNESOTA MINING AND MANUFACTURING COMPANY



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NEWS OF THE YEAR IN

PACKAGING

INTERSTATE FOLDING BOX announ first on-machine cast coated boxboard.



HIGH GLOSS EYE AP-PEAL... Glosscoat gives the luxury look and feel to any package. White is whiter . . . high gloss colors are richer, more brilliant, have added depth and realism.



UNIFORM PRINTING SURFACE . . . Glosscoat prints beautifully. The surface is not only smooth but has a natural affinity for ink—making fine, full color reproduction possible.



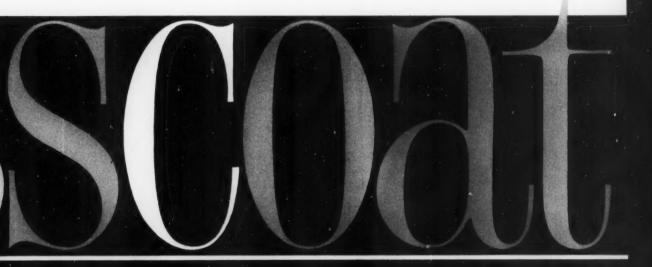
CRACKPROOF FOLDING
... Glosscoat's patented
coating process provides
unusual folding characteristics. Even in heavier
weights and calipers it
folds without cracking.



RUB AND WEAF SISTANCE . . . Glos resists abrasion, ture, grease, finger and handling abus long shelf life. No ing overprint varn needed.

he packaging news of the year is Glosscoat. It is the first high gloss, cast coated box ever to be made directly on the board machine. As a result, Glosscoat has all the advant and all the economies provided by a single continuous operation. Major users of compackaged goods can benefit in many ways by the advantages which the entirely new, pal Glosscoat method of on-machine cast coating makes possible. Product of a 50-year company noted for its developments in every phase of packaging improvement, Glosscoat significant advantages never before available to quantity users of folding boxes, carton protective packages. Colors! Here is the first colored cast coated boxboard. Weight!

inces a great new technological advance...the d...available in colors and up to thirty-six point!





REAR REGlosscoat
COLORS . . Glosscoat
is manufactured in ten
breath taking pastel
colors plus white. Glosscoat opens the door to
varnish is new field of boxboard
design possibilities.



EXCEPTIONAL FADE RE-SISTANCE . . . Glosscoat offers remarkable resistance to the yellowing action of sunlight. White stays white—colors remain bright—for extra long shelf life.



WEIGHTS UP TO 36 POINT . . . Glosscoat is the only cast coated boxboard in weights up to 36 point—the only cast coated board in any weight offering a range of colors.



PRACTICAL LUXURY... Glosscoat is the luxury board at a practical price. Cast coating advantages are now available to thousands of folding box users.

I boxboard advantages consumer , patented O year old coat offers artons and

eight! Here

is the first cast coated boxboard up to 36 point. Folding! Here is the first cast coated boxboard that folds beautifully without cracking—even in heavier weights. Fade resistance! Here is greater resistance to sunlight than ever before obtained. Yes, Glosscoat is a great technological breakthrough Get samples! Get costs! Get the full story about Glosscoat cartons, folding boxes and protective packages by Interstate! Glosscoat is such an important packaging development, in fact, you will want to re-examine your company's entire packaging program without delay.



STRAWBERRY ICE-621

SHELL PINK-620

SUNLIGHT-616

SPACE BLUE-612

GLOSSCOat

LIGHT AQUA-614

CAST COATED BOXBOARD IN BEAUTIFUL COLORS

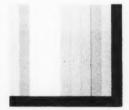
PALE AQUA-613

CANARY-617

ORCHID PINK-618

EGGSHELL-615

Glosscoat is a package designer's dream. For here in a genuine cast coated boxboard is a full range of beautiful pastel colors plus white to open up new design frontiers. Picture the possibilities of using this practical luxury boxboard for your own packages. Visualize the unique effects, the striking beauty, the complete individuality—yes, the enormous all-around competitive sales power which high gloss pastel colored boxboard makes possible. No wonder Interstate's Glosscoat is called: Packaging News of the Year. Use of colored Glosscoat presents no problems! Glosscoat is not an over-wrap, not a varnish, not a lamination. It is a new method cast coated board—in colors—with packaging possibilities never before obtainable. Colors are beautiful, clear, clean and uniform from order to order. And remember, Glosscoat in colors and white is available up to 36 point. Users of large folding boxes and packages, too, can thus tap the immense advantages of this remarkable stock. Make sure that everyone in your organization with an influence in packaging is aware of Glosscoat. Put Glosscoat on the agenda for your next packaging meeting.



FREE COLOR SAMPLES

Glosscoat samples are ready . . . a full range of lovely pastels plus white. Write, wire, or telephone!

THE INTERSTA



LDING BOX COMPANY, Middletown, Ohio

Makers of ROTOSEAL machines and INNER-LINED containers



Management has agreed . . . automatic marking, coding and imprinting methods have come a long way. And so has equipment to do the job. Precision equipment means precision results. Production men know this.

That's why Bell-Mark automatic marking machinery, printers and coders are built a little better. Do more problem jobs. Are engineered to the need.

A letter or a call will bring an illustrated brochure to your desk. A specific question will bring a specific answer.



BELL-MARK CORPORATION
18 ROPES PLACE NEWARK 7. NEW JERSEY

Manufacturers of coding and printing equipment, automatic marking machinery.





SWIFT'S ADHESIVES FOR PROFIT

In Packaging...

IS LIKE THE RIGHT PRODUCTION MANAGER

Maybe you can't compare apples and oranges, and most likely no one wants to be compared with an adhesive. But the *right* production man and the *right* adhesive can have an important effect on profits.

The right production manager not only cracks the whip, he applies an intimate knowledge of his men and machines to a production process calculated to turn out a quality product . . . at maximum profit.

Similarly, to contribute to *profitable* production, the right adhesive must do more than just adhere.

Swift's hundreds of resin adhesives for packaging are specifically formulated to offer the user selectivity in speed, machine-ability and tack characteristics. They are high in strength, strong in tack, long in machine-ability—and many are versatile too.

Don't overlook the profit opportunity in properly specified, properly used packaging adhesives. Swift is the informed source for prompt, courteous, and authoritative service. 24 strategically located Swift adhesives plants produce a complete line of packaging adhesives for the most specific applications. Call your nearby Swift Adhesives Specialist, or write for further information. Swift & Company, Adhesive Products Department, Chicago 9, Illinois.

To Serve Your Industry Better

WITH THESE ADHESIVE PRODUCTS

RESINS AND RUBBERS IN EMULSION OR SOLVENT; DRY, LIQUID AND FLEXIBLE ANIMAL GLUES LIQUID DEXTRIN ADHESIVES

A-59



Another manufacturer of a nationally known product chooses a Cleveland container. It's RA-PID-GRO, the miracle plant food! This attractive container has a smooth, colorful green label which is pleasing to the eye. The bright tin plate bottom and top complete the unit. For perfect function, the plug fits snugly into the top ring. And the container is inexpensive!

Your product probably will require a different type of container. It may be square or oblong instead of round. Or it may have a transparent plastic C-Thru body instead of paperboard. Or the closure may be one of the new "Dial-O-Matic" plastic sifting and pouring designs. Or you may want a moisture and grease resistant liner of parchment, glassine, aluminum foil or some plastic film. Foil labels may be used for added protection and brilliant display.

Regardless of the packaging requirements of your product, Cleveland Container has the facilities and locations to take care of your specific needs. We manufacture a complete line of containers and tubing.

Use Our ENGINEERING Department

to help you with your packaging problems!

Years of experience and up-to-the-minute thinking are available to you without charge.

This valuable service can result in striking changes in your packaging designs.

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Plymouth, Wis.

CLEVELAND CONTAINER CANADA, LIMITED Jamesburg, N. J.

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> Abrasive Division at Cleveland

CROCKER BURBANK PRINTABLE CLIFTER POLYGLEAM

A new advance in the packaging field — PG POLYGLEAM* by Crocker, Burbank — makes it possible to produce envelopes, wrappers and boxes on conventional package-making equipment, using polyethylene coated paper that combines the functional qualities of polyethylene with a decorative, glueable, high gloss printing surface.

PG POLYGLEAM can be printed by standard processes on regular equipment with available inks • can be glued on existing packaging and box-making machinery using ordinary water-base glues at standard production speeds • has high gloss, decorative, washable finish • is waterproof and highly moisture-vapor resistant • is grease resistant • will not crack on folding or scoring • will not migrate nor bleed • maintains all of these features permanently.

Crocker, Burbank Printable, Glueable Extrusion Coated Polyethylene May Be Obtained On Paper or Board

Write today for samples and complete information

CROCKER BURBANK PAPERS.Inc.

FITCHBURG, MASSACHUSETTS

Make your products stand out from the crowd with





Send us your labels for redesign, without charge or obligation; or ask for our estimate on printing your present labels. Telephone, wire or write to any representative below or to A. M. Steigerwald Co., 910 W. Van Buren, Chicago 7. Telephone TAylor 9-5400.

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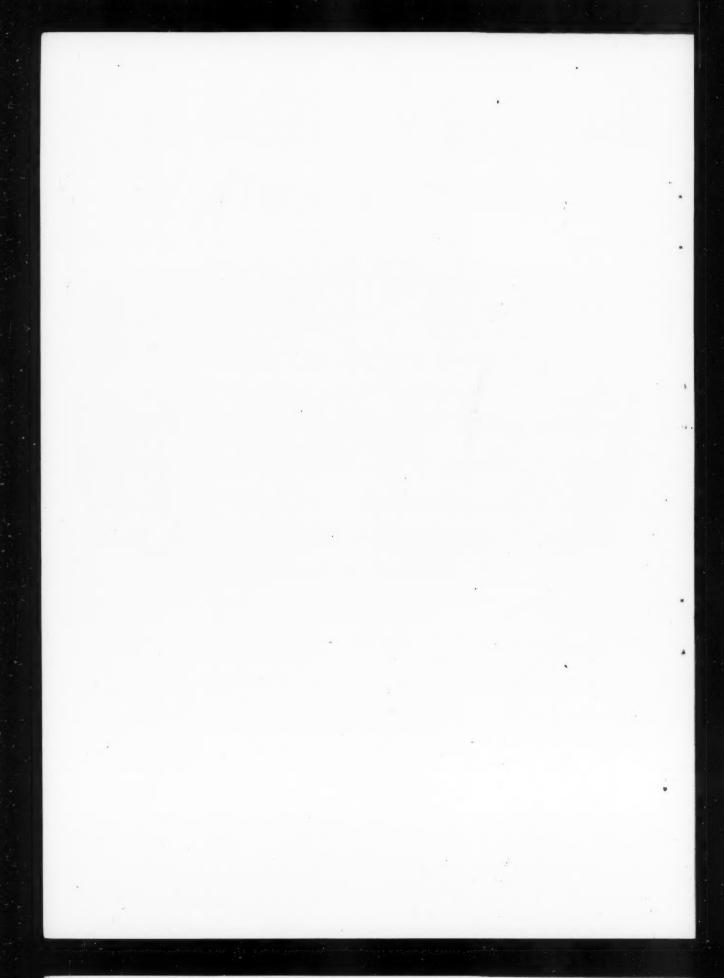
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NEW YORK 25, N. Y. John H. McLaren 500 West 111th St. Monument 2-0237

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GOLD OR SILVER EMBOSSED . DIE-CUT OR SQUARE . FOIL SEALS AND TAGS . FLAT OR CONTINUOUS ROLLS FOR HAND OR AUTOMATIC USE . HEAT SEAL . PRESSURE SENSITIVE . SPECIAL ADHESIVES



MASTERPIECES IN METAL CONTAINERS



new from Clark

Metal and plastic are joined advantageously in this attractive new spice container, available in 16- and 8-oz sizes. It is distinguished by a revolving plastic dispensing disc that this securely but opens at the gentlest touch—to sift or pour.

18th century English tea caddy-courtesy The Art Institute of Chicago

Through the ages metal artisans have been inspired to design handsome functional containers for man's most important commodity—food. Since the turn of the century, J. L. Clark has provided marketers of many leading brands in the food industry with attractively lithographed metal containers. Continuous research and development provides Clark customers with the latest in metal container designs and finishes (such as the unique new Tectone textured finish on the Rawleigh spice can shown above). Whether your products are foods, food specialties or fall into innumerable other fields, we suggest that you come to Clark—where your packaging needs will be served effectively and economically. . . J. L. CLARK

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There's a plus-factor in every MOSSTYPE product and service

Premadeready

RUBBER PLATES



Plainback, Stickyback, "C-M" Precurved, "Hug-Tite" Brass-back. Made to the most exacting standards by exclusive MOSSTYPE methods. Complete integrated pre-press production service includes "Engineered" Artwork and "Extra-Depth" Pattern Engravings.



Ready-to-Print
DESIGN ROLLERS

Ideal for printing decorative all-over designs, or complex jobs with many small units. Permanently vulcanized on "D-MOUNT" or integral cylinders. Multicolor and combination flexo/gravure jobs accurately pre-registered.



Lightweight, low-cost . . . but infallibly accurate. Foolproof and easy to use. The only integral cylinder with an interchangeable shaft that fits all cylinder diameters.

Saves money, time, space.



Enables you to increase press productivity by preproofing every job, in color, before placing it on the press. Speeds up, simplifies accurate mounting of plates on cylinders.

Saves its cost in months!

/ Service Centers for Flexographers



BOOTHS 341-342 PACKAGING SHOW CHICAGO · APRIL 10-13

For descriptive literature, contact our nearest service center or write to MOSSTYPE, Waldwick, N. J.

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"PLATEKOTE" . RUBBER PLATE WASH . STOCK DESIGN PLATES . STICKYBACK ADHESIVE



you make your next packaging decision, we'd like to be on hand showing you how readily liquids dispensed by the new captive cap closures are used, used up, and bought again



EQUIPMENT & MATERIALS

AMA's 30th National Packaging Exposition will be held April 10-13 at McCormick Place, Chicago's new exposition hall. As in past years, the Show will introduce new developments in packaging machinery and materials. Many of these new products available to packagers are described below. Wherever it is possible to identify them in advance with the 1961 Packaging Show, they are so identified.

Preprinted linerboard for corrugated cases

Three years in development, a new preprinted bleached kraft linerboard which is claimed to enhance significantly the merchandising appeal of corrugated containers will be introduced at the Packaging Show this month by St. Regis Paper. Advantages of the preprinting process which it has evolved, says the supplier, include: high-quality printing effects in multicolor; close registration; fine detail in illustrations and copy; no-ripple surface, because no hard printing rollers touch the liner after it is applied. In the company's preprinting technique, bleached kraft rollstock is printed in a single pass through a rotary four-color press in advance of corrugated-board fabrication. Electric-eye equipment regulates critical cutting accuracy of finished corrugated sheets to achieve extremely close tolerances for color, slotting and folding registration, says the supplier. By contrast, conventional corrugated board used for product cartons and shippers is printed on the slotter-printer after the combining operation. Because of the softness of corrugated fluting, soft rubber rolls must be used to avoid crushing the flutes-thereby restricting printing quality and causing a "ripple and shadow" surface that affects decoration and printing legibility. Moreover, four-color jobs must be run through twice, causing production delays and added costs. Marketing areas open to preprinted-linerboard corrugated, says the firm, include supermarket displays and many products normally packaged in materials other than corrugated-among them detergents, seeds and fertilizers, toys, sporting goods, small appliances, specialty foods and accessories. St. Regis Paper Co., 150 E. 42 St., New York 17.

Label imprinter and applicator

The Sensomatic, a machine that automatically imprints pressure-sensitive labels and then applies them to packages, will be introduced at the Packaging Show this month by Monarch Marking System. The imprinter/applicator attachment can be installed on the conveyor line horizontally or



vertically, permitting the accommodation of packages of varied sizes. In the accompanying illustration, it is shown suspended from overhead rails, applying labels to containers traveling along a conveyor below. According to the supplier, the new device not only reduces packaging-labor costs, but also cuts label inventory and eliminates label obsolescence through its imprinting feature. The Monarch Marking System Co., Dayton 3, O.

Foil container with shrink-film cover

A foil-film container which is claimed to reduce packaging costs is among the new items being exhibited at the Packaging Show this month by Ekco-Alcoa. It consists of a



rigid aluminumfoil pan and a shrinkable polyethylene cover. This film closure. which reportedly has tensile strength six to eight times that conventional low-density polyethylene and which can be

shrunk to 50% of its original size, is a development of W. R. Grace Co.'s Cryovac Div. (see p. 252, this issue). According to Ekco-Alcoa, the foil-film container can be used for a wide variety of products, including baked goods and frozen foods. The completed package is reported to control moisture and gases and to offer increased shelf life. The film cover, which conforms to product contours across the top of the container, is said to reduce handling, damage and rewraps. It also affords a 40% savings in materials, because only the top of the product and the rim of the container are covered, says the company. For further details, contact Ekco-Alcoa Containers Inc., Wheeling, Ill.

Carton-forming machine

Claimed to offer exceptional flexibility and versatility is Crandall's FM60-A automatic carton-forming machine. It forms and glues single-wall cartons with or without a hinged lid and double-wall cartons with pre-glued double side walls. The machine produces a wide range of carton sizes and types, using either corrugated or paperboard. New glue templates and swinging spray nozzles are said to permit more accurate glue pattern as well as faster change-over of carton sizes. A miniature photo-electric attachment and blank-detection devices enable the machine to operate with little or no attention other than blank loading, says the supplier. The machine is on display at the Packaging Show this month. Crandall, Inc., Oak Park, III.

Acetal copolymer plastic

Celanese Corp. has developed an acetal copolymer plastic called Celcon, which it will feature at the Packaging Show this month. The material is said to be suitable for a broad range of plastics applications, including packaging. It is suggested for the blow molding of a variety of container forms, among them acrosols, as well as for extrusion and injection molding. Advantages cited for this acetal copolymer include high strength, hardness, stiffness, dimensional stability, light weight and resistance to abrasion and environmental attack. The material also is said to stand up well under high temperatures. Production of the material (by Celanese Polymer Co., a div. of Celanese Corp.) has begun at the supplier's Clarkwood, Tex., plant. A new plant also is under construction at Bishop, Tex. Celanese Corp. of America, 180 Madison Are., New York 16.

Self-adjusting case sealer

From Union Bag comes a new closing machine which adjusts automatically to seal corrugated containers of varying sizes. The K&M Randomatic, as it is called, can be

GAYLORD researches out

the failures

You can't afford to experiment: the wrong kind of shipping container can cost you hours, customers and dollars.

So Gaylord packaging research engineers experiment for you with the complete box, liners, adhesives, interior design—the works. Every Gaylord container that you get is *proven*.

Does your product need a better container? Call your nearby Gaylord Man. Let him and Gaylord Research go to work for you now.





CROWN ZELLERBACH CORPORATION
GAYLORD CONTAINER DIVISION



IN CANADA - CROWN ZELLERBACH CANADA, LTD. VANCOUVER, B. C.

HEADQUARTERS ST LOUIS PLANTS COAST TO COAST

Equipment & Materials [Continued]

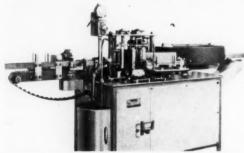
seen at the Packaging Show this month. At reported speeds of up to 12 cartons per minute, it seals random-sized cases in any order in which they may be fed down the line. Shippers ranging in size from 4 by 8 by 10 in. to 18 by 20 by 30 in. can be handled. The machine applies a thermoplastic scalant which sets in two or three seconds and reportedly eliminates the need for the shipping carton to pass through the usual long compression section to insure adequate top and bottom closure. Self-adjustability to varying case sizes is provided by an internal mechanism which moves in from its outer limits until it meets resistance from the carton. Once this container is sealed, the mechanism retracts to its outer limits. Union Bag-Camp Paper Corp., 233 Broadway, New York 7.

Variety of packaging materials

A number of new products, including packaging films, corrugated containers and shipping bags, will be introduced at the Packaging Show this month by Olin Mathieson. Included is the company's "V" series of polymer-coated cellophanes designed for use with foods that have high shortening content and require moistureproof packaging. The films are claimed to have excellent printability and machinability, and to resist shattering, shrinking and cockling. They also are claimed to have good scalability at low temperatures or high speeds. Also available from the supplier is OF-18, a polyethylene-coated cellophane for wrapping fresh red meats. The material is said to have dimensional stability, a clinging quality and sparkling clarity even under humid conditions. Another new film from the company is OF-20, a cellophane coated with a combination of antioxidants and designed primarily for use as the inner wall of bags for high-grease-content products. Among the company's new corrugated shipping containers are the Humi-Gard and the Scuff-Master. The former is reported to have built-in moisture resistance which enables it to be used for shipping produce and other items easily damaged by moisture. It is available in a variety of styles and sizes at no increase in cost over conventional shippers. The Scuff-Master shipper has a special interior coating that guards products against scuff damage during shipment. A new multiwall shipping bag, the Skid-Master, has an inherent non-skid quality that is claimed to reduce bag damage during handling and shipping. Olin Mathieson Chemical Corp., 460 Park Ave., New York 22.

Compact straight-line labeler

Making its debut at the Packaging Show this month is MRM's straight-line SL-85, an automatic continuous-motion labeling machine. The new unit, a compact version of the



company's CM Labeler, is designed for medium-speed operations. It can handle round, oval, flat or tapered glass and metal containers ranging in size from 1 in. high by 3\(^1\)-in. diameter to 14 in. high by 7-in. diameter. Labels of any size up to 6 by 7 in. (including wrap-around type) can be accommodated. The machine is equipped with a magazine that holds up to 3,000 labels. MRM Co., 191 Berry St.. Brooklyn 11.

Seamless piston-type pressure can

A seamless aluminum pressure can that utilizes a piston principle to separate the product from the gas propellant is newly available from Bradley-Sun. The lightweight aerosol container will be exhibited at the Packaging Show this month. The supplier says that separation of product from propellant by means of the piston device clears the way for the introduction in aerosol containers of a number of viscous products—including foods—that could never before be packaged in pressure cans. American Can Co., Bradley-Sun Div., Hillside, N.J.

Portable, automatic bag sealer

Errich International's Speedy Auto-Bag Sealer, Model 11-17, will be introduced at the Packaging Show this month. The



portable unit occupies less than 9 sq. ft. of floor space. It is designed to seal film bags up to 11½ in. wide by 18 in. long. Bag-sealing speeds of up to 30 per minute can be achieved, ac-

supplier. Among the features cited for this new unit, which uses the hot-wire seal principle, are: rapid adjustability to varying bag sizes, a dial-in dwell timer for different seal thicknesses, neat trimseal, blow-away disposal of trim residue, and 10-second warm-up time. An air-cooling harness is designed to keep the upper sealing jaw at the proper temperature, the company points out. Exrich International Corp., 35 W. 36 St., New York 18.

Parchment packaging papers

Two new parchments are being introduced at the Packaging Show this month by Paterson Parchment. One is Glueable Patapar Releasing Parchment, which is reported to meet food- and industrial-packaging requirements. It combines releasing properties on one side with a surface that will accept glue or other adhesive on the other. The paper is suggested for packaging tacky industrial products (such as synthetic rubber) or sticky foods (such as cinnamon buns). The supplier's other new parchment is a mold-inhibiting material that is claimed to extend food shelf life by retarding spoilage. Designed especially for packaging cheese, preserves, baked goods and other moldsusceptible products, the paper can be printed and sealed. It also is recommended for lamination to paper and plastic food containers. The paper's mold-inhibiting treatment has been approved by the Food & Drug Administration as meeting the requirements of the 1958 amendment to the Federal Food, Drug and Cosmetic Act, says the supplier. Paterson Parchment Paper Co., Bristol, Pa.

New bottling-line equipment

A number of new machines are being exhibited at the Packaging Show this month by Climax Products. Among them is the Unimatic Single Filer, a machine that feeds bottles or other containers onto a single-file conveyor belt for travel to the filling station. This unit incorporates a wire mesh infeed conveyor, over which cases of empty containers are inverted. The belt moves the mass of containers into a four-lane oscillating head which feeds a single file of containers onto the outfeed conveyor. The machine can also be used as an unscrambler. Three other new machines in the Unimatic series are being shown by the supplier. A bottom-loading case packer is claimed to provide scuff-free packing of up to 480 bottles or cans per minute. In machine operation, containers are lifted into an openbottom case, rather than dropped in from the top. This action, says the company, eliminates scuffing of labels or seals while permitting production rates of up to 20 cases



pots, pans, dust and rust...

Anything in powder sells better in a Harcord canister. The cleansers lined up here are eloquent proof. Harcord knows how to keep the costs down on your low-end line, how to super pack the foaming or chlorinated or premium cleanser, and how to satisfy the housewife with canisters that are quick opening, quick sifting, don't go soggy in her hands. Whatever dry product you pack, in quantity or in small lots, you will find the right protection and the right price when you specify Harcord canisters.

YOU SELL IT BETTER, YOU SAY IT BEST, IN PAPER CANISTERS BY

HARCORD

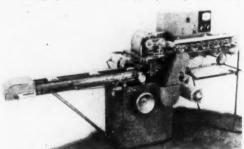
HARCORD MANUFACTURING CO., INC., 125 Monitor St., Dept. MP-4, Jersey City 4, N. J. New York Tel: BArclay 7-5685

Equipment & Materials [Continued]

per minute. The machine handles half-pint, pint, lifth, quart, half-gallon and gallon containers. Also new from the company is a continuous-operation four-flap case opener rated at 25 cases per minute. The automatic unit opens side and end flaps in a continuous, straight-line operation which is reported to eliminate case turning. Vacuum is used to initiate flap lift; a mechanical plow completes the operation. The supplier's other new development is an uncasing machine that automatically rejects empty bottles with crown closures still in place. Without this feature, says the company, a capped bottle might cause damage in washing or filling operations. Climax Products Div., Lodge & Shipley Co., 3055 Colerain Ave., Cincinnati 25.

Versatile wrapping machine

Crompton & Knowles offers the CKM-3 Straight Line wrapping machine. The new unit, which is on display at the Packaging Show this month, reportedly can accom-



modate any thermoplastic film and can apply bunch folds or die folds. Film rolls up to 13 in, wide can be handled on the machine. Package shapes and sizes that the machine will wrap are: rounds, 3 to 4% in. diameter; squares, 3 by 3 in. to $4\frac{1}{2}$ by $4\frac{1}{2}$ in., and rectangles, 3 by 3 by $\frac{1}{2}$ in. to 6 by 412 by 212 in. The straight-line machine's discharge conveyor consists of a flat bottom belt of Teflon-impregnated Fibreglas and a Neoprene-covered top belt. Packages are carried over a heater plate and then a water-jacketed cooling plate. The top belt, the supplier says, provides the pressure needed to insure a tight bottom seal. Another feature cited for this unit is an air jet that floats the film past the cut-off knife. The film is held firmly on two endless belts by two rolls of steel balls which are reported to prevent film shifting when the belt stops, Crompton & Knowles Packaging Corp., Holvoke, Mass.

Three-color printer for plastic bottles

A machine specifically designed for three-color printing of flat and oval plastic bottles in one pass has been developed by International Eastern. It will be exhibited at the Packaging Show this month. The new offset press, Model R1MF/3F, prints on polyethylene and other plastic containers. It is claimed to be extremely accurate. All working movements are indexed electro-automatically. From a removable three-compartment ink reservoir, ink is fed first by lifting rollers to the spreaders and then to the printing blocks. According to the supplier, this new press brings new low cost as well as improved efficiency to the printing of vari-shaped plastic containers. International Eastern Co., 301 Sixth Ave., New York 1.

High-gloss, no-glare overwrap

At the AMA Packaging Show this month, KVP Sutherland will exhibit its new KVP Impact—a carton overwrap that is claimed to provide bright, appealing gloss without distracting glare. The overwrap is suggested for cartoned food products and a variety of other self-selection products. According to the company, the overwrap achieves luxurious

appearance through a specially formulated intense white paper with exceptional printability. The heat-sealable overwrap has a wax-free surface that is reported to resist dust build-up. KVP Sutherland Paper Co., Kalamazoo, Mich.

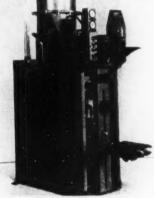
Tetrahedral container and machine

Bemis Bro. has acquired the patent rights to Ultra-Pak, a tetrahedron-shaped flexible package, and to a machine which forms, fills and seals the container in a continuous operation. The patents were acquired from a California group of co-owners represented by the inventor, William . Schneider. Bemis reports that the tetrahedral package holds promise of rapid and sustained growth, citing its applicability (in container sizes of 1/8 oz. to 1 qt.) to such products as syrups, salad dressings, grated cheese, catsup, mustard, detergents, motor oil and additives. Tetrahedron packages already are in use as milk containers and unitof-use packages for such products as jams, soaps and cosmetics. The supplier also notes that the tetrahedral container saves on material cost, reporting that the same amount of material yields up to 100% greater capacity as a tetrahedron than it does as a standard pouch. The Ultra-Pak machine is capable of intermittent product filling, which makes it possible to package powders, liquids or semi-liquids in the tetrahedral container. Other advantages cited for the form-fill-seal unit are high-speed operation (140 to 250 containers per minute) and accommodation of virtually any roll form of heat-sealable material. A separate subsidiary will be set up by Bemis to handle manufacture and marketing of the machine, which will be exhibited at the Packaging Show this month. Bemis Bro. Bag Co., 111-H N. Fourth St., St. Louis 2.

New bulk-filling equipment

An air-pressure packer—designed for accurate, convenient filling of bulk dry products into bags or drums—will be introduced at the Packaging Show this month by H. L.

Stoker. The new Stok - Aire unit (illustrated) accommodates containers ranging from 20-lb. to 250lb. content. Products that can be packaged vary from powdery materials to particles ½ in. in di-Packagameter. ing speeds depend on the product and on the size of valve (3 to 6 in.) used. Average speed, says the supplier, is



four to six bags per minute. This new filling machine combines pressurized delivery with an electronic weighing system. Pressure chambers are available in three sizes, to suit individual head-room requirements. The electronic weighing system includes an over-under weight indicator and electronic trimming, to eliminate the need for check weighing. Also on display is the supplier's Model DX, which also handles bulk dry products and employs a feeding auger to deliver the material into bags or drums. Interchangeable hoppers and delivery screw enable the machine to package powdered, granular, pelleted or flaked materials. H. L. Stoker Co., Claremont, Calif.

Compact film-bag sealing unit

Amsco Packaging Machinery offers the Amscomatic 75, a film-bag sealing machine. Designed for medium-speed operations, it is a compact version of the supplier's Amscomatic 100 series. The new unit, which can be seen at the Pack-[Continued on page 246]



"This new CHASE POLY-PLY multiwall bag is a real Problem Solver"

Says Lee Schram, Multiwall Bag Buyer, Morton Salt Company

The Morton Salt Company needed a new and better bag for its salt shipments—a moisture-resistant bag that would be easier to handle and ship, more flexible at low temperatures, highly resistant to abrasion and rupture, yet economical in cost.

To solve this problem, Chase developed the Poly-Ply Multiwall Bag featuring an entirely new construction. It combines—for the first time—the advantages of a ply of light-weight sheet polyethylene and heavy-duty multiwall paper. It provides excellent moisture protection...extra strength...new ease of handling...flexibility even at temperatures way below zero. After six months testing under commercial conditions Morton officials report highly satisfactory results!

If you package moisture-sensitive products—such as sugar, chemicals or fertilizers—this new bag can be a problem solver for you, too. It is now available in 25-, 50- and 100-pound sizes. Call your Chase representative for full information.



New and Unique Construction: separate, intermediate ply of sheet polyethylene, shielded by heavy-duty kraft paper inside and out, assures effective moisture protection, strength and easy handling advantages.

CHASE BAG COMPANY



Protective Headrest Cover



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SAFETY RAZOR

Handy Razor Kit

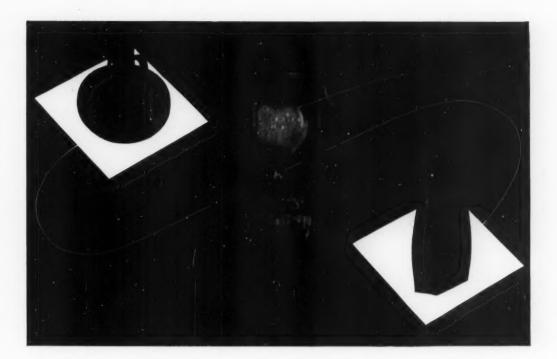
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in transparent film packaging . . . tremendous experience amassed over the years, and
continuous research today, enabling us to
lead the way in new development — these
are the factors that guarantee you the most
knowledgeable, most useful opinion on
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Do you want advice on the transparent
packaging film that will suit your product
best? We have scientists and technicians,
the foremost in their field, to help you
select the appropriate one. They may
suggest cellulore film in one of its many

types. Perhaps you may need BCL polythene film. Or your product may be an 'awkward' one—something you thought could never be packaged visibly...like a liquid, a cream or paste, a powder; acid, alkali, grease, salt; a heavy, sharp article. In this case we should probably recommend polythene-coated cellulose film or one of our new plastic films.

Contact us now for further details and samples of our films. And if you need practical help to use them to best advantage, we are ready and keen to co-operate with you.



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How unseen polyethylene guards

Polyethylene coating provides an economical means of adding extra protective qualities, plus heat-sealability when needed, to packaging materials such as paper, paper board, cloth, cellophane, foil, etc. An ultra-thin coating of Spencer "Poly-Eth" 1018 seals moisture in or out of your package and permits a tight, heat-seal closure.

Up To 30% Faster Production At Lower Coating Weights

with new Spencer "Poly-Eth" 1018 Coating Resin

The makers of the 3 famous brands on the opposite page rely on polyethylenecoated packaging materials to protect the quality of their products. So do hundreds of other packagers—and the list is growing every month.

And now, Spencer Chemical Company introduces a superior new polyethylene coating resin called "Poly-Eth" 1018 that offers greater coating efficiency and economy than ever before possible.

In actual commercial use by Spencer customers, "Poly-Eth" 1018 permitted up to 30% faster production at lower coating weights than any other competitive coating material available. For example, with Spencer "Poly-Eth" 1018, 40-pound Kraft paper was successfully coated using as little as 1.2 pound of resin per ream at 900 feet per minute. Under identical conditions, the next best competitive polyethylene required 3.7 pounds of resin per ream, and its maximum coating speed was only 550 feet per minute.

If you make, sell or use coated packaging materials, it will pay you to find out how "Poly-Eth" 1018 can fit your needs. Spencer Technical Service representatives are available to help you work out production details. For further information, write Spencer Chemical Company, Dwight Building, Kansas City, Missouri.



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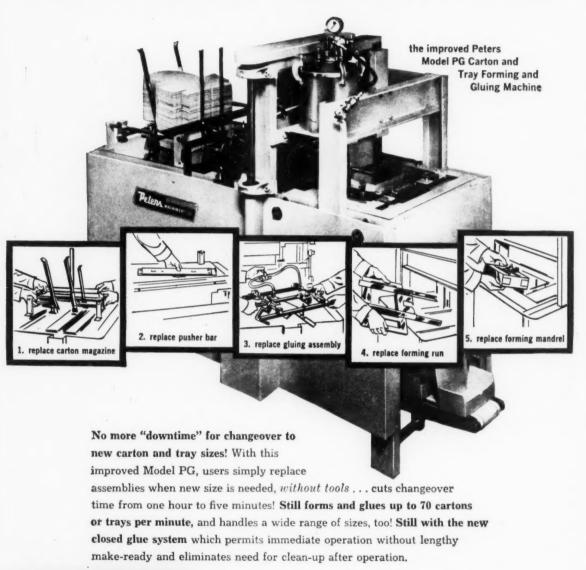
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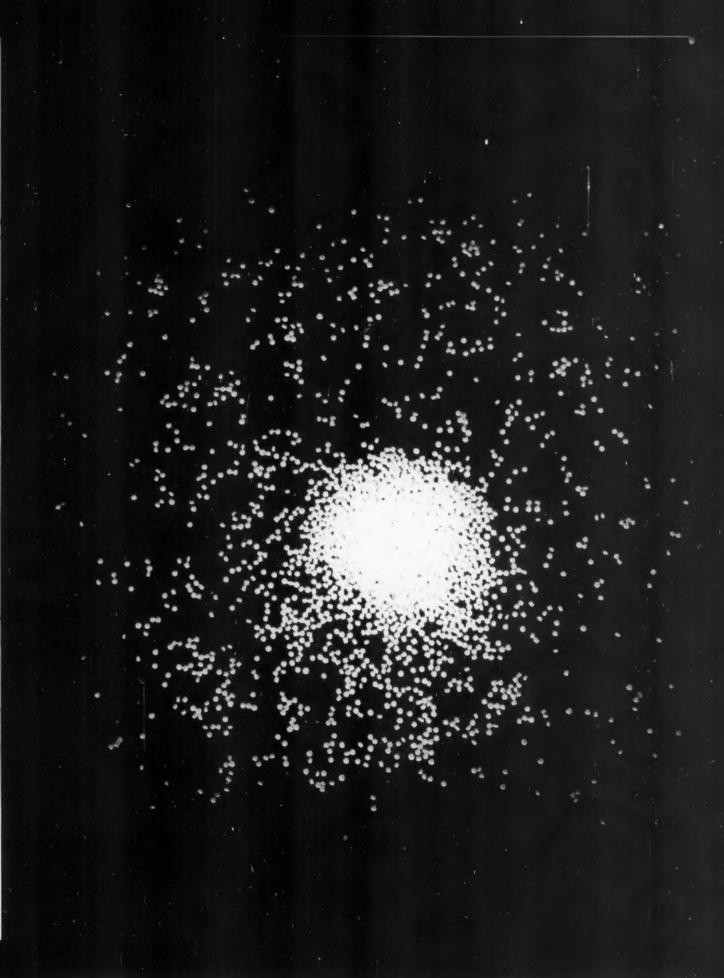
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Ameripol—the only high density polyethylene that

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And that's not all. Here are other advantages you can expect from Ameripol: Color—in an unlimited range of shades. Finish that will give your products a beautiful sheen and a smooth, glass-like feel. Machinability—easy to cut, groove or punch.

Ameripol is opening up new horizons for plastics processors. See what this new Goodrich-Gulf product can do for you!



combines durability with processibility

a better wire insulation, easily produced

If you're looking for a tough insulation for wire and cable, Ameripol high density polyethylene is your answer. You're assured of an insulation with excellent dielectric properties and resistance to elevated temperatures . . . a wire coating that virtually eliminates cut-through problems. All this plus easy extruding. You can use this superior material on your standard equipment and insulate wire and cable at commercial production speeds. Results: better products, better profits.

faster extrusion of smoother pipe

Goodrich-Gulf's unique high density polyethylene proves its distinct superiority as the material for plastic pipe. First, you'll find this high molecular weight Ameripol Polyethylene produces a smoother pipe, and this means faster production, bigger output.

Ameripol Polyethylene resists contamination, keeps pipe lines pollution-free. It produces pipe that resists cracking under stress, withstands impact, is easy to install. And Ameripol requires no special costly equipment or special dies. Put Ameripol Polyethylene to work for you now.



How to put this new polyethylene to work in your operation

It's easy. A call to Goodrich-Gulf Technical Service is all that's needed. An experienced sales engineer will come out to your plant and help you select the right grade of Ameripol for your product. You'll find that Goodrich-Gulf has the technical know-how to handle every aspect of your high density polyethylene needs — from application and production to shipping and storage. See how better products start with Ameripol high density polyethylene — Write for your Ameripol Technical Data file now!



AMERIPOL POLYETHYLENE HAS SUPERIOR PROPERTIES THAT WILL PAY OFF IN YOUR PRODUCTS

Physical Property

Density
Molecular Weight
Melt Index (condition E)
Flow Index (a) (condition F)
Intrinsic Viscosity
Vicat Softening Temperature
Ultimate Tensile Strength, 20 ipm
Tensile at Yield, 20 ipm
Elongation, 20 ipm
Impact Strength (b)

16 x 1/2 bar

14 x 1/2 bar 14 x 1/2 bar

Stiffness in Flexure Hardness

Environmental Property

Environmental Stress Cracking (c)
With Anti-oxidant
Without Anti-oxidant
Thermal Embrittlement (d)
With Anti-oxidant
Without Anti-oxidant







Goodrich-Gulf Chemicals, Inc.

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MODERN PACKAGING ENCYCLOPEDIA ISSUE FOR 1961 / VOL. 34 NO. 3A



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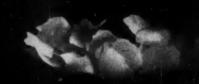
• The life span of the MODERN PACKAGING ENCYCLOPEDIA for 1961 is one full year. In that time, the fast-moving nature of packaging developments makes some materials, methods, and machines obsolete. However, during its year, the Encyclopedia remains monarch of all it surveys... providing completely up-to-the-minute articles and information, charts, tables and diagrams concerning the entire packaging field.

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keep instant foods
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foil offers new economy and improved protection in scores of applications. If you're in packaging and need pouches that do the most for a product, then you need a packaging partner that will do the most for you. Talk to Alcoa—the company that will put its packaging experience, its research facilities, its process development resources and its merchandising and marketing knowledge to work for you.

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If you have either an FMC Non-Shock Caser for cans, or a "Sure-Way" Package Caser, consider the additional speed, efficiency and savings in operator manhours now available to you with the new, fully-automatic "Sure-Way" Case Set-Up Machine.

Under present conditions, if you are operating your caser in the area of 1200 cases an hour, you are probably using two or three operators to set up and feed cases to the machine. Add a "Sure-Way" Case Set-Up Machine and experience these benefits:

- · Up production to 1500 cases an hour
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The only manual function involved is that of placing

flat shipping cases in the feed magazine of the Set-Up Machine—it's as simple as that. In fact, one man can easily attend two automatic lines at the same time.

An extremely versatile unit, this machine can be made to handle top, side or end-open cases as large as 25" x 24" x 18", or as small as 7" x 7" x 3"—and given ranges between these extreme limits. Moreover, it is easily adapted and integrated to existing caser installations, and in many instances may be furnished with a "Sure-Way" Case Sealer for a fully integrated operation.

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Leaders, like those whose products are shown, are setting new sales records with custom-designed packaging by Shaw-Randall . . , in blister, formed or fabricated design. Call on Shaw-Randall to add "vision" to your product in an unusual package design.

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Foxon

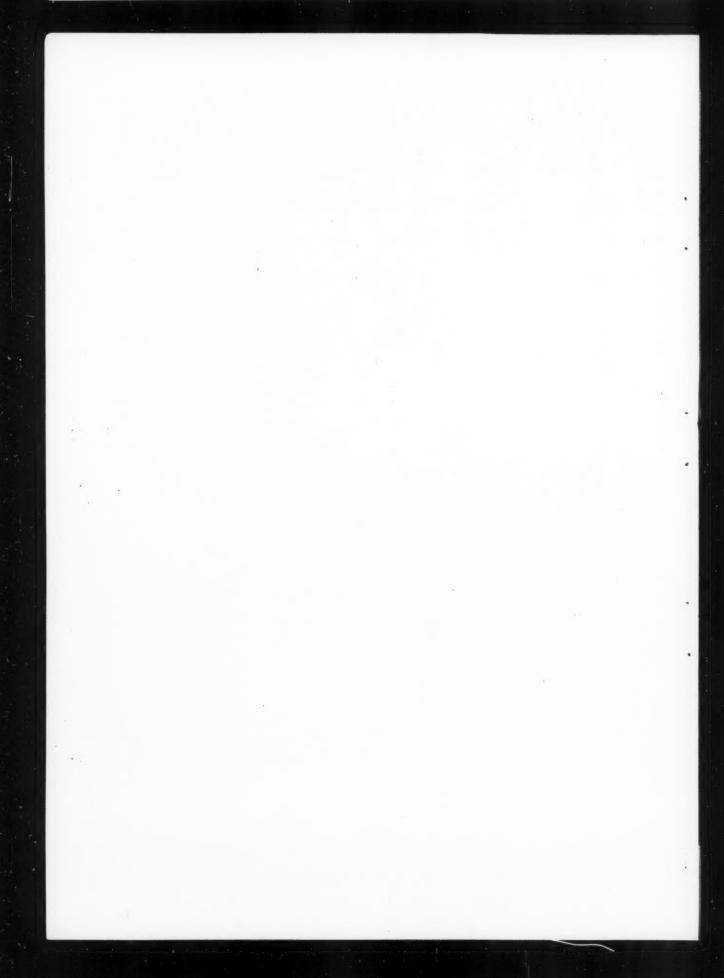
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- COMBINES THE DESIGN ADVANTAGES OF THE RISDON
 VALVE WITH THE FIRST AND FOREMOST MECHANICAL
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- 2. WIDE RANGE OF APPLICATION

Gives excellent performance on all 3-phase products including water-base formulations. Dispenses propellant emulsions or dispersions. Gives Super-spray performance on conventional 2-phase and ultra-low pressure products. Applied to Glass, Metal and Plastic Containers.

- WIDER CONE, FINER, DRIER SPRAY CLOUD Softer, more evenly diffused spray eliminates splattering.
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Especially advantageous in expensive products such as medicinals and perfumes.

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 Using MICRO-MIST valve on two-phase
 products gives dual-action atomization which
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8 Reasons Why
RISDON
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can help you achieve optimum performance with the right blend of polyolefin modifying resins

A paraffin coating formulation containing a combination of polyolefin modifying resins, rather than one resin alone, will most often provide the optimum balance between such important coating properties as tensile strength and adhesion.

To aid you in obtaining optimum properties for specific paraffin coating applications, Eastman offers seven basic types of low-

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1961 PACKAGING LINE

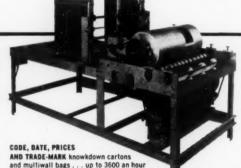
with an 1890



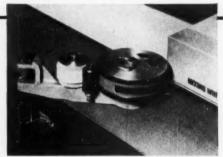
marking set-up?

Don't shackle your packaging line with an obsolete marking system. Look into the four IME imprinters on this page. All four synchronize to the speed of the line. All work smoothly, print distinctly, save you and customers time and bother. All offer heavy-duty construction for first-rate performance.

1961 packaging demands 1961 marking: IME marking. Performance guaranteed. For detailed, illustrated brochure write today. Dept. MP

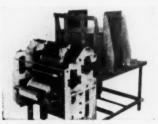


and multiwall bags... up to 3600 an hour
.. with the new Flexopress. Prints top, bottom and sides in one
pass. Attaches to present units. Ideal for web and sheet-fed work,
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Removable plate cylinders for off-press registration. Available in
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PRINTS boxes, cartons and containers at production-line speed, whatever that speed may be. The Whippet® conveyor-line marker will mark all that passes it . . . easily adapted for top or side marking, too. Interchangeable type. Easy to maintain.

MARKS UP TO 3000 PER HOUR CARTONS AND BAGS AUTO-MATICALLY: the #7 Autoprinter ® Prints well on nearly every flat, absorbent surface, does one or both sides in one pass. Ink dries fast, doesn't cake . . . no need to clean rollers after use.



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Water Softener

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STAMFORD CONN "



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Broil the burgers. Break but the beer, America's picnic basket overflows with good things to eat. Tons of summertime snacks are shipped in corrugated boxes by Hinde & Dauch Division. Sturdy, lightweight boxes-planned for shipping economy. Leading food producers regard H&D as their primary source for money-saving corrugated boxes in volume.





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WE ASK THE READERS

How are you meeting in-plant maintenance problems posed by complex, high-speed, automatic packaging equipment?

Edward D. Wilcox, Jr., Mechanical Engineering Superintendent, Lever Bros. Co., New York: Our approach to the problem of maintaining packaging equipment is to keep a staff of specialist mechanics solely devoted to packaging-machinery maintenance. These men are assigned to the operating departments by their supervisor and are in constant attendance at the lines. Their sole function is to make all necessary adjustments and repairs to keep the equipment operating for as high a percentage of the time as possible. In addition, they are supported by one or more traveling oilers, who circulate on a scheduled routine to lubricate the machinery. Several mechanics are kept in the central shop unassigned. These men are available to assist in any operating department which develops troubles beyond the ability of the line mechanic to handle alone. When not occupied on the packingroom floor, they are kept busy making or repairing machine parts, setting up equipment, etc.

In general, this procedure has proved fairly workable as long as packaging equipment remained basically mechanical. Given the continuing trend to more complex machinery involving sophisticated hydraulic, pneumatic and electric-electronic components, an increasing problem is arising. Not only do these require higher individual talents for troubleshooting, but they introduce the added complication of requiring several crafts for their maintenance. Since as yet it has not proved practical to equip our packaging-machinery maintenance departments with other than mechanical craftsmen, and they are prohibited by union regulations from working in other than their own trade, it is necessary to call on the general-plant maintenance force for the other skills needed.

There remains much that the packaging-machinery manufacturers themselves can do to assist. Specifically: (1) provide more detailed instruction manuals; (2) make greater use of modular subassemblies, plug-in electrical components and quick-disconnect hose fittings to provide greater ease of repair by substitution, hence minimizing down time for troubleshooting and actual repair; (3) work toward development of standards within the industry through trade-association groups; (4) make more general use of complete central one-shot or automatic lubrication systems.



George G. Flood
Director of Manufacturing
Grove Laboratories, Inc.
St. Louis

Since in-plant maintenance associated with new highspeed automatic packaging equipment is a continuous process, it calls for a continuous program both in conditioning set-up and maintenance people to be receptive to changes and in giving them an opportunity to advance in skills and ability.

The increased complexity of high-speed automatic packaging equipment requires additional skills and challenges which not only call for normal mechanical experience, but additional schooling.

On-the-job training is offered by most new-equipment manufacturers, who will even provide the opportunity for your people to watch the equipment being assembled and point out the problems to be expected. Thorough knowledge of the working parts of the equipment can be obtained in this way. Local trade schools and colleges offer courses in electronics, etc., which seem to be the source of most maintenance problems on new complex equipment. Also, in most instances, the lead man, foreman or supervisor is given an indoctrination in a new piece of equipment; he then trains set-up or maintenance men in its operation.

Preventive maintenance plays a big part in any maintenance program. Accurate records should be kept on all down time and reasons for such down time indicated. Lubrication charts should be maintained. Thus, trends and sources of difficulty can be forecast.



John Carlson Manager, Engineering Dept. The Chun King Corp. Duluth

The maintenance problems involved with high-speed or complex packaging equipment become more acute each day. Chun King attempts to partially meet the

Sounding Board [Continued]

problem by sending our people whenever possible to the equipment-manufacturers' plants for training at the time our specific equipment is in the final stages of assembly and testing. In this way, the maintenance and operating people become familiar with the machine and can be better prepared to me t the everyday maintenance, as well as emergencies as they might arise, once the equipment is placed in production.

Also, assigning a specific machine or groups of machines of a similar nature to one maintenance man and giving him the responsibility for the proper care and operation of such machinery and equipment works beneficially in a twofold manner:

First, the system appeals to the natural competitive spirit of a man and each mechanic wants his machine to be the best unit productionwise of any machine in the plant. Second, to attain this status, it requires the man to keep his machine in a good state of repair and readiness and also compels the mechanic to learn all he can about the machines for which he is responsible, so that he can meet any emergency quickly, correctly and in the most efficient manner.



Gus G. Greanias Senior Methods Engineer A. E. Staley Mfg. Co. Decatur, Ill.

Our packaging lines fall below the "high-speed" classification, since our highest-speed line today runs at 140 containers per minute on a 1-lb, starch package. Nevertheless, our company has recognized the value of specially trained, skilled mechanics based adjacent to our packaging operations.

In our Decatur plant, we operate seven bottling lines and nine cartoning lines to handle the increasing volumes of "Sta-Flo" liquid starch, "Sta-Puf" laundry rinse, "Hip-O-Lite" marshmallow creme and the growing variety of starches, syrups and other items for our Grocery Products Division.

We have a small machine shop headed by a foreman, directing the work of six mechanics and two apprentice mechanics. This group handles line change-overs, major equipment adjustments, repairs breakdowns, orders or fabricates repair parts, makes modifications to line layouts or equipment as needed, and does development work on new equipment not available from suppliers. Other work assigned to this group is sewing-machine maintenance and supervision of installation of any new equipment purchased.

Approximately 20% of the shop hours are required for change-overs to meet production schedules, 40% is spent in routing repairs and breakdown correction, and the balance in training operators to handle minor equipment adjustments, installation or relocation work or preventative maintenance.

Job requests originate in the Packaging Department and require that maintenance-work scheduling be co-

ordinated with production. The small-machine shop is a part of the plant-maintenance program and can draw from its pool of mechanics and engineers as needed.



W. A. Johnson
Supervisor, Mfg. Engineering
Trumbull Lamp Plant
General Electric Co.
Warren, O.

Over the past few years, our installation of new designs of automated packaging equipment has created inplant maintenance problems. In order that these maintenance problems could be set up and handled on a practical basis, it was necessary for us to define our objectives. These objectives were: (1) Keep the equipment in operation with a minimum of down time. (2) Expend a minimum number of dollars for maintenance, repair, labor and materials. (3) A minimum of damage to the packages handled by the equipment.

With these objectives in mind, we set up record keeping which would provide us with operating facts. For example, we wanted to know the following: (1) What percentage of the time is the equipment out of production because of breakdowns? (2) What caused the breakdowns and what was the frequency of the various causes? (3) How many manhours of repair time are required? (4) What parts and how many are being replaced? (5) What percentage of the packages are being damaged by the equipment.

Because our equipment was relatively new, we used these facts to take the following corrective steps: (1) Reviewed them with the designers and manufacturers of the equipment. (2) Redesigned the weak parts to get longer life from our equipment.

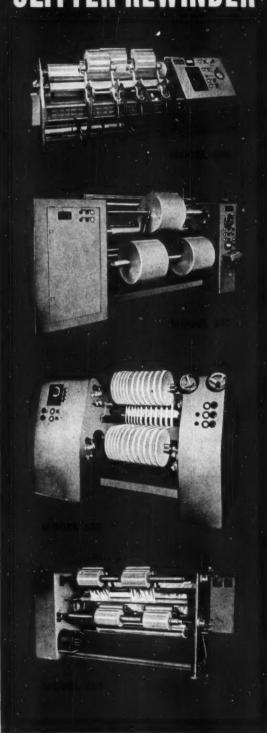
This procedure enabled us to set up an intelligent, detailed preventative-maintenance schedule which effectively meets the objectives we defined.

H. E. Hildebrand, Jr., Engineering Div., Continental Baking Co., Rye, N. Y.: The problem of assuring adequate maintenance of high-speed bread- and cake-wrapping equipment at our company has been solved by a strict adherence to a preventive maintenance program. Under this system, each wrapper is inspected daily by a qualified engineer using as a guide a card listing all important points that require daily servicing, such as end-seal-attachment knives, back-tension assemblies for proper tension, heaters and thermostats for loose wires, paper knife for dull teeth, etc. Once each week the wrapper is given a thorough inspection along with a complete retiming and, here again, a PM card is used by maintenance as a guide to assure a complete check of all components.

With our PM system, we do not allow any mechanical adjustments to be made by our operators.

Establishing a PM program alone would not have provided the results we have obtained. Prior to the PM program, we had a three-day training school for each maintenance employee in all Continental plants. The original training program has been augmented with refresher training as it was deemed necessary.

DUSENBERY HAS THE



TO MEET YOUR REQUIREMENTS TO FIT YOUR

PRICE RANGE

With the addition of the new, versatile Model 800 and the low cost Model 810 Slitter-Rewinders to its well-known line, Dusenbery presents a wide range of mgchines in various models to meet the most exacting individual requirements . . . and to fit your particular price range. All machines employ rewind systems which give smooth, clean-sided, finished rolls from badly wrinkled, off-caliper rolls. One of the machines illustrated is suitable for your purpose.

Most versatile to handle all off caliper materials from heavy kraft and/or laminates down to the lightest gauges of plastic films at high speeds.

MODEL 800 . . . a totally new concept has been incorporated into the Model 800. Slitting by shear and/or razor blade. Score cut can be provided for special applications.

SPECIFICATIONS

For paper, tape, all plastic films, foils and laminates. MODEL 815 . . . designed for high speeds, the Model 815 handles light, stretchy films and heavy paper with equal facility. Supplied for shear, razor blade and/or score cut slitting. Air operated unwind and rewind tension controls. **SPECIFICATIONS**

- Width—through 72"
 Minimum Slit Width—¾"
 Web Speeds—to 1,500 FPM. (Depends on slit widths, naterial and drive).
- Rewinds available from 3" I.D. cores and up.
- Rewind Diameter-24" with or without individual lay-on rolls for each slit width.

MODEL 635 . . . can be supplied for shear or razor blade slitting. Air operated unwind and rewind tension controls.

SPECIFICATIONS

- Width—through 62" Rewinds available for 1" through 6" I.D. Cores.
- Minimum Slit Width-1/4"
- Web Speeds to 600 FPM. (Depends on slit widths, materials and drive.)
- Rewind-131/2", 18" and 24" diameter.

For cellophane, acetate, butyrate, mylar, nylon, polyethylene, polystyrene, teflon and triacetate films.

MODEL 810 . . . compact, low-cost razor blade Slitter. The capacity of the Model 810 is equal to that of many larger machines. Manually operated . . . no air required.

SPECIFICATIONS

- Maximum Web Width—62"
 Maximum Rewind Dia.—18"
 Maximum Unwind Dia.—24"
- Maximum Speed—200 FPM Rewind—3" I.D. Cores
- Drive—2 HP electronic variable speed
 Power Requirements—220 Volt 60
- cycle single phase

 Unwind Shaft—115/14" diameter for
- 3" I.D. Cores.

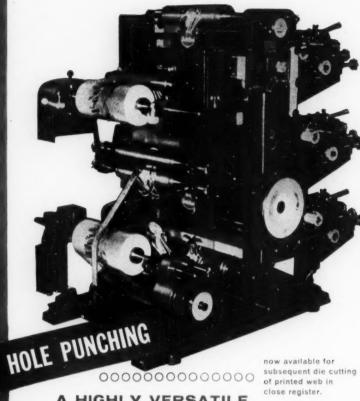
For complete information and technical data, see us at the

NAT. PACK, SHOW **BOOTH NO. 233** April 10th thru 13th

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HEINRICH LILLIPUT



A HIGHLY VERSATILE FLEXOGRAPHIC PRINTER FOR NARROW WIDTH MATERIALS

Narrow-width materials are in great demand for numberless packaging items. For outstanding multicolor printing on these narrow webs, the LILLIPUT provides proven, dependable operation, quality printing and good register.

This highly versatile press prints equally well on a large variety of materials and can be quickly changed from job to job. Above all, it is attractively priced.

Features of the LILLIPUT Endprinter

- Printing widths 9", 16" Friction rewind station and 20"
- Printing repeats . . . 71/8" to 20"
- One to three colors Unwind stand up to 24" max. roll diameter
- 4" CP or 10-pitch gears for plate cylinders
- · Anilox engraved steel transfer rollers.
- Plus many optional features

Send for illustrated brochure.

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"There was once a product
called DYNA-FOAM
Known from Hong Kong to Bombay to Nome
Then a trademark attorney
Whose first name was Ernie

Said DYNA-FOAM should be called

XAN-FOAM*"

For complete details and samples of XAN-FOAM, our extruded polystyrene foam, see us at Booth 420, National Packaging Show in Chicago, or write directly to:

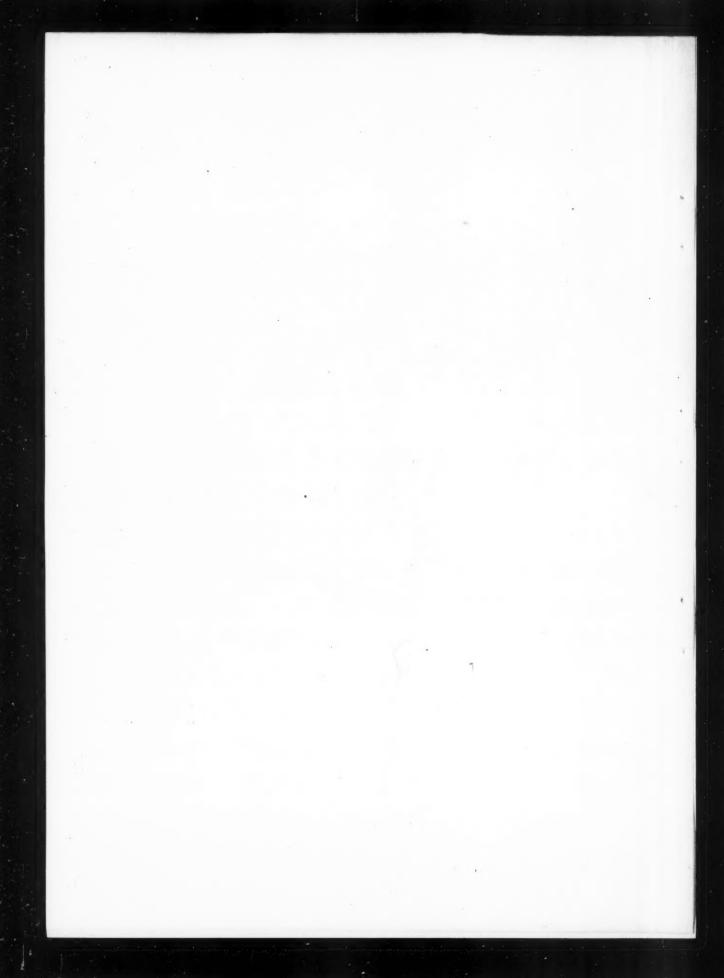


Sun Chemical Corporation

ELLENVILLE, NEW YORK

FIRST IN EXTRUDED PLASTIC FOAM





Packaging Notes

Liquid-tight carton with built-in liner of polyethylene-coated paper requires no overwrap. Heat sealing, hot-melt



Wrapless frozen-food carton developed on West coast has polyethylene-coated paper liner which interlocks with flaps on folding. Subsequent heat sealing and gluing complete liquid-, vapor-tight clasure.

adhesive and unique design of package all contribute to leak-proof closure. It has proved commercially acceptable for packaging frozen strawberries.

According to the company adopting it, this folding box and special integrated machine which opens, fills and seals it have boosted production speed substantially. Furthermore, it reportedly costs less, is easier to open and provides a better barrier to transmission of water vapor than the metal-end fiber can it has replaced.

Polyethylene squeeze bottles for cosmetics, and toys and Christmas ornaments are now being finished by a new vacuum



metallizing process. Result is an adherent metallic coating—with a texture which reportedly withstands many squeezings and takes printing without pre-treatment. A choice of colors is available.

According to the developer, process is competitive in cost with ordinary plastics metallizing.

Clams-in-the-shell have joined the growing list of polyethylene-packaged, individually quick-frozen foods. Whole frozen clams are now available on the west coast in 7½" x 13", 3-mil polyethylene bags. According to the marketers, polyethylene was selected for packaging because "it is relatively inexpensive and controls breakage."

U.S.I. EXHIBIT - BOOTH 1112
30TH NATIONAL

30TH NATIONAL PACKAGING EXPOSITION

LAKE FRONT EXPOSITION CENTER, APRIL 10-13 CHICAGO, ILLINOIS

Show Bound? Visit U.S.I. Booth For New View of Polyethylene Packaging

Experts to Demonstrate Latest Equipment . . . Discuss Recent Resin Developments

An array of packaging, injection molding and bag-making machines in action will be U.S.I.'s main attraction in Booth 1112 at the 30th National Packaging Exposition. Sponsored by the American Management Associa-

tion, the show will be held April 10-13 at Chicago's Lake Front Exposition Center.

To Package Give-Aways

In operation will be three See-Safe packaging machines, which automatically package objects in polyethylene film from slit roll stock. This lineup will include: the Model MA, packaging free give-away items; the MA Jumbo, packaging large products in one step; and the brand new MA-T tilt-top machine, pouring and packaging small parts in quantity.

quantity.

Two Conapac machines will also be featured by U.S.I. The "Roto Poly-200", a high-speed heavy-duty machine, will be making bags from blown polyethylene tubing. It has a capacity of up to 200 cycles/min., operates at speeds up to 175 ft./min. This machine is reportedly the first which can handle any density polyethylene film. The "Rotojet" Model T5 will be injection molding small polyethylene containers. Said to be the first rotating turret type machine to appear in this country, it operates at speeds up to 50 shots/min., uses 8 inexpensive single-cavity molds.



For extruders, converters and packagers of produce, soft goods, hardware or toys, the highlight of U.S.I.'s exhibit will be a new Petrrothene polyethylene resin. Film extruded from it combines maximum clarity and gloss with high impact strength, and offers optimum performability as well. It machines with ease . . . prints without problems . . . seals readily and securely. Samples, application information and complete technical data will be available for this and all other PETROTHENE resins.





The See-Safe MA automatic packager (top photo) and Conapac Poly-200 bag maker are 2 of 5 new machines U.S.I. will feature at the 1961 exposition.

Coated Substrates and Blow-Molded Containers

On display, too, will be samples of polyethylene-coated kraft, foil and cellophane. And, a variety of containers-including bottles produced from new PETROTHENE blow-molding resins. Of particular interest will be the 5-gallon collapsible jug just put on the market.

Information Center

U.S.I. technical representatives will again be available to answer questions and talk over innovations in polyethylene packaging. Exposition visitors are encouraged to use this opportunity to get expert help on specific problems.

U.S.I. to Produce Linear Polyethylene

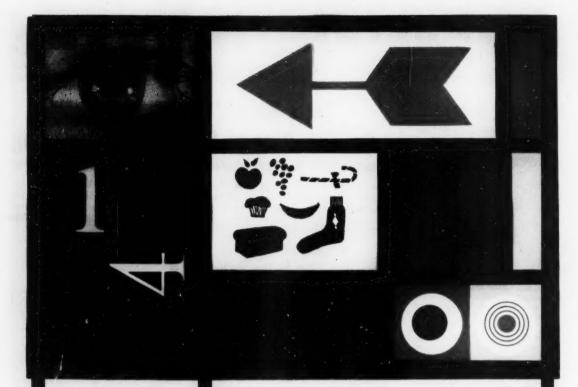
U.S.I. will begin construction this spring on a 60 million pound-per-year linear polyethylene plant at Houston, Texas, adjacent to the company's conventional polyethylene facilities. The new plant, which will mark U.S.I.'s entry into the manufacture of linear polyethylene, is scheduled for completion in the fourth quarter of 1962. It's designed for easy expansion.

Recently there has been considerable discussion about over-capacity in the linear polyethylene field. Dr. Robert Hulse, general manager of U.S.I., states: "We would not be building this important new plant if we did not believe that over-capacity is a short-term problem

and that linear polyethylene is growing in importance. Every market projection we have made indicates that this versatile plastic will be in short supply by early 1963!"

The linear polyethylene will be manufactured under a licensing agreement with Phillips Petroleum Company, and will be sold under U.S.I.'s trade name, PETROTHENE® polyethylene resin.

Linear polyethylene is stronger and more rigid than the conventional type. Uses are: blow-molded bottles and containers; injection molded toys and housewares; extruded pipe; and film for heavy duty bags.



Colorful Polyethylene

... offers powerful sales advantages

Every color of the rainbow – from brilliant hues to subtle pastels can be printed on clear polyethylene film. Colorful designs, sales messages and product information on your packages produce attractive showcases that draw buyers to your products.

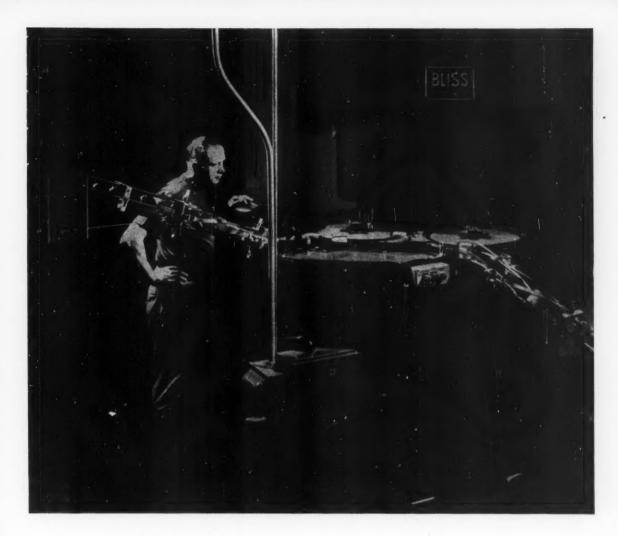
Polyethylene is economical. Polyethylene is the least expensive high clarity film you can buy. It can be printed economically at high speeds, with sharp registration and good ink adhesion. Add to this the soft, natural flexibility and durability of polyethylene and you have a versatile packaging material that offers you powerful sales advantages.

Colorful polyethylene packages are now being used for a host of applications, including produce, dairy, bakery, laundered shirt packaging, and soft goods overwrap. Packages can be formed on automatic machines . . . sealed by heat.

U.S.I. produces a number of PETROTHENE® resins ideally suited for producing packaging film of every type — clear or printed, thick or thin, tough or tearable, slippery or sticky. Extruders and converters make these films available in a wide range of thicknesses, with a combination of special properties to meet your every packaging need.

Discuss your packaging requirements with your film supplier. He'll be glad to recommend the type of polyethylene film best suited to your particular application.





In 60 seconds...

THIS MACHINE DELIVERS 200 ALUMINUM CAN BODIES

Secret of the new drawn aluminum can line recently unveiled at Central States Can Corporation is this Bliss rotary redraw press. Multiple die stations rotating around a center post make possible extremely high output rates, without exceeding safe drawing speeds. The Bliss redraw press at Central States produces 200 drawn aluminum cans per minute, as equipped. However, production speeds as high as 400 per minute are perfectly practical by the simple expedient of doubling the number of heads, and provision has been made for this in the design of the machine. For more information on this remarkable new press . . . and other developments in can making equipment . . . write us today.

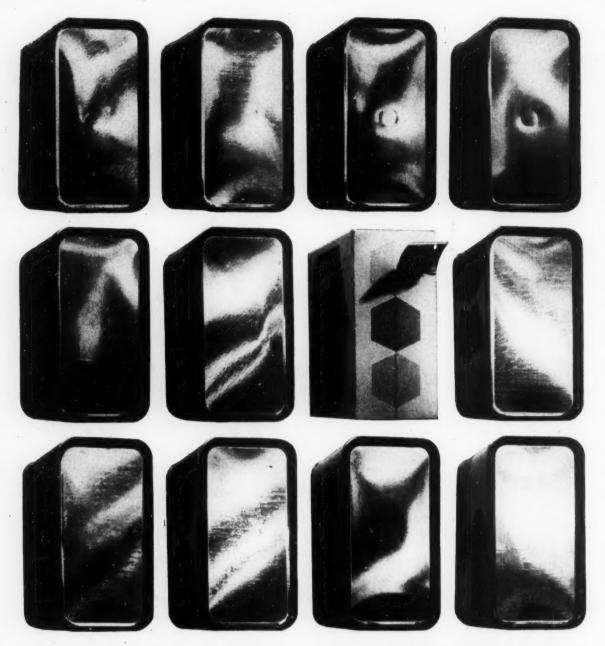


BLISS is more than a name—it's a guarantee

E. W. BLISS COMPANY . Hastings, Michigan

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PRESSES . ROLLING MILLS . ROLLS . DIE SETS . CONTAINER MACHINERY . CONTRACT MFG. . PUBLIC SAFETY



WHICH ONE COMES FROM FIBREBOARD?

Which carton was created by a team of frozen food <u>specialists</u>—including designers and engineers, salesmen and scientists? Which carton comes from the company where every major industry is covered the same, sensible way: by teams of experts in that specific field? Which carton, in short, comes from Fibreboard? Your customers can pick it out—and do.

The carton from Fibreboard: easy-opening Fibrematic, the minor miracle for frozen strawberries. You simply grasp the flap—and let 'er zip! No more metal ends . . . and Fibrematic is leakproof, airtight, easy to fill. Shouldn't your cartons come from this kind of company, this type of concept? Write: Fibreboard Paper Products Corporation, 475 Brannan Street, San Francisco. (Also New York, Chicago, Los Angeles, other major cities.)



KIMBLE SHORT VIALS...

convenience packaging for you and your customers

Convenience for you: New distinctive squat design of these containers makes for greater stability on automatic, highspeed filling lines.

Convenience for your customers: New compact styling makes Kimble Short Vials less likely to tip or spill.

Space-saving Kimble Short Vials are lightweight and optically clear. Uni-

form glass distribution provides uniform filling points.

To help make your product stand out from others, your Kimble Short Vials may be distinctively identified with clear, permanent ACL labeling. ACL is fused right into the glass.

Tight-fitting Kimble closures keep your product fresh and clean . . . free from dust...keep out dirt and moisture.

Let Kimble put its extensive pharmaceutical packaging experience to work for you in helping solve packaging problems. . . . Ask to see Kimble Drug Sample Packaging Study.

Write to Kimble Glass Company, subsidiary of Owens-Illinois, Dept. DT-2, Toledo 1, Ohio.

KIMBLE CONTAINERS
AN (1) PRODUCT

Owens-Illinois

GENERAL OFFICES . TOLEDO 1, OHIO



No. 19A Colton-Hope High-Speed Automotic. Fills liquids, creams, pastes into bottles, jars, cans. ¼ oz. to 32 oz. per nozzle; 4 to 14 nozzles, Up to 250 fills per min. Many accessories available.



No. 19 Colton-Hope High-Speed Autometic. Fills liquids, creams, pastes into bottles, cans, jars. Excellent for filling, top-finishing, disc-plating in cosmetic cream work. 3/ oz. to 32 oz. per nozzle; 4 to 8 nozzles. Up to 160 fills per min. Widely adaptable through many accessories.



No. 15RF2 Colton-Hope Twe-Line High-Speed Automatic. Fills liquids, creams, pastes into glass, plastic, tin, paper containers. ¼ oz. 10 32 oz. per nozzle; 1 or 2 nozzles available. Many outstanding features. Up to 60 fills per min. Many accessories available.

No. 27 Colton-Hope Heavy-Duty Automatic. Fills high viscosity and ropy materials such as caulking and greases into tubes or cartridges. Sizes up to 2" x 10"; 2 to 6 nozzles. Up to 90 fills per min.

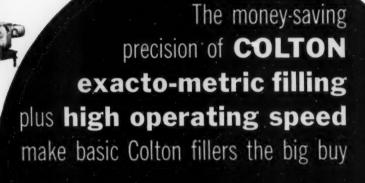


No. 21 Colton-Hope Single and Twin Automatic Conveyorized Heavy-Duty Filling Machine. For filling liquids, creams, light and heavy pastes such as paints and smilar products into jars and cans. Production up to 10 cycles per minute per nozzle. I and 2 nozzles available. Paint can lid dropping and pressing features available.



No. 175 Colton Automatic Tube Filler, Closer and Crimper with Ejector.* Fills liquids, creams, pastes into tubes, small bottles, jars, cans. Cleans, fills, folds, crimps, ejects. Various fillers offer 30 to 300 tubes per min. per machine.

*No. 176 Plestic Tube Sealing Attachment; low cost conversion unit to replace standard folding heads on Models 171F and 1751F machines, Gives dual-purpose machine handling metal or plastic tubes. Model 172 Cotton enclusively for high speed sealing of plastic tubes.



the Colton line—most complete and versatile in the world. Such
basic machines, readily adaptable to individual application by means
of accessories engineered to the machine, give, in effect, a custom
engineered machine at standard machine price. It is this adaptability that
enables us to say "Colton fills practically ANYTHING into ANYTHING."

Many other Colton fillers available. Write for Filling Machine
Application Data Sheet. Detailed specification sheets available
Arthur Colton Company, 3400 E. Lafayette Ave., Detroit 7
Michigan, Sales and Service offices throughout the country
Plants: Detroit, Mancelona, Elk Rapids, Michigan



No. 116 COLTON VOLUMETRIC HIGH-SPEED ROTARY FILLER Liquids, creams, pastes into jars, bottles, cans up to 10" high, 4" dia.; ½—32 fl. oz.: 110-520 containers per min. Exact fill control, "no-can-no-fill" device, bottom-up fill, 8" rise platforms each station. Timing screed container feed. Hopper, 35 gal. Straight line stainless steel conveyor system 10" long. 8-pocket infeed starwheel; 12-pocket discharge starwheel.



COLTON fills practically ANYTHING into ANYTHING























PACKAGING

CELLUPLASTICS, INC

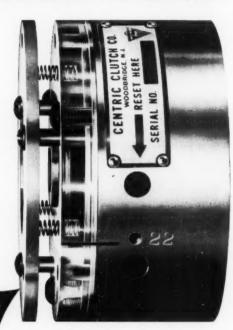
A Subsidiary of Brockway Glass Co., Inc.

24 COMMERCE STREET NEWARK, NEW JERSEY

FOR AUTOMATION

CENTRIC'S "TRIG-O-MATIC" OVERLOAD RELEASE CLUTCHES

A new field tested signaling actuator to be used in conjunction with the proved "Trig-O-Matic" Overload Release Clutch.



Modern high speed machinery requires torquelimiting devices that automatically disengage at a predetermined torque to give complete overload protection.

Centric's "Trig-O-Matic" Overload Release Clutches' unique design provides positive torque limitation without wear on the clutch. Their trigger action disconnects the load the instant an overload occurs. Along with the new signal actuator, "Trig-O-Matics" will perform these four important functions -

- 1. Automatically disconnect load.
- 3. Signal the occurrence of machine overload.
- 2. Instantaneously shut down power-drive.
- 4. Maintain indexing (due to inherent design)

When overloaded condition is corrected, the clutch is reset and operation is resumed in a matter of minutes - without special tools. The driven machine then resumes operation at the exact cycle point at which it was released.

Trig-O-Matics" are fool proof — service-free. Do not require lubrication or adjustment. Are not affected by climate changes.

Are delivered as complete units - ready to install. Available with flexible couplings (shaft-to-shaft), sprockets, pulleys, sheaves and gears.

Standard design "Trig-O-Matics" have capacity ranges from 9" lbs. to 30,000" lbs.

Bulletin #304 completely describes "Trig-O-Matics"



INQUIRIES ON SPECIAL CUSTOMIZED CLUTCH REQUIREMENTS ARE INVITED

lutch Company

Also manufacturers of the well known Centric Centrifugal Clutch-Couplings. P.O. BOX 175 U.S. ROUTE 9 AT MAIN STREET WOODBRIDGE, N. J.



The case of the chewy cheese case



MISS WATSON: Fearless, I know this cheese is delicious!

But who would bite the case?

FEARLESS FULLER: Must be someone with excess of zeal,
Miss Watson. You'll have to admit the
whiteness and freshness of this cheese
case makes for an appetizing package.

MISS WATSON: Fearless, weren't cheese cases always so tasty looking?

FEARLESS FULLER: Not always. Box makers often have used a dark glued lap adhesive because the white adhesives were pretty expensive. Every so often the application machinery would squeeze out the dark adhesive and discolor the case.

MISS WATSON: Oh, but this box looks perfect!

FEARLESS FULLER: It should be! It's sealed with Fuller #1594, a new white synthetic resin glue. It costs less than other white glues—and just a slice more than the brown glues. And it's as invisible as you are after 5 o'clock.

MISS WATSON: Oh, I bet your customer was happy!

FEARLESS FULLER: Miss Watson, the box maker was happy and the Cheese King was overjoyed! More people will "say" cheese again.

MISS WATSON: Oh Fearless, you're so ... so ... masterful!

FEARLESS FULLER: We Fuller Men are masters of our customer's adhesives problems, Miss Watson!

Got an adhesive problem? Call your nearby H. B. Fuller plant—and ask for "Fearless" Fuller.

H.B. Fuller Co.

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announcing PORTA-TIE



See it demonstrated at Booth 917, Packaging Machinery Show

Now, a portable version of the famed Tipper Tie clip-closure machines extends all the advantages of the faster, more economical Tipper Tie system to a host of new clip-closure operations.

PORTA-TIE brings the benefits of quicker, cieaner compressed-air clipping to such bagging and wrapping operations as multi-wall bags and drum liners in the chemical, pharmaceutical and other fields; the protective bagging and wrapping of sporting goods, machines, appliances, hardware, toys, food, etc.

Tipper Tie installations have long been in wide use in the meat and poultry industry where

speed, economy, and an attractive, clean-looking aluminum clip are prime considerations.

See it demonstrated at the Packaging Machinery Show . . . and send for literature on new, economical, versatile PORTA-TIE.

A Clip-Closure for Every Packaging Operation

FOODS: meat, poultry, dairy products, produce, baked goods. DRUGS: proprietaries, sundries, cosmetics. HARDWARE: tools, accessories, machine parts. TOYS, NOVELTIES: stuffed animals, dolls, assembly operations. MULTI-WALL BAGS AND DRUM LINERS: chemicals, fertilizers, building materials.



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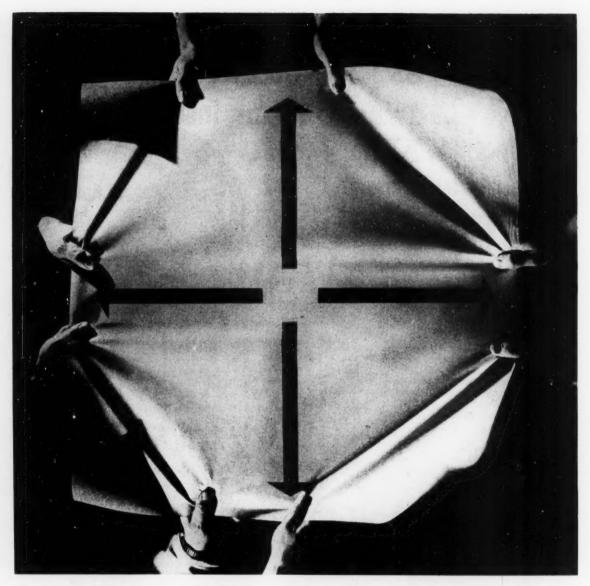
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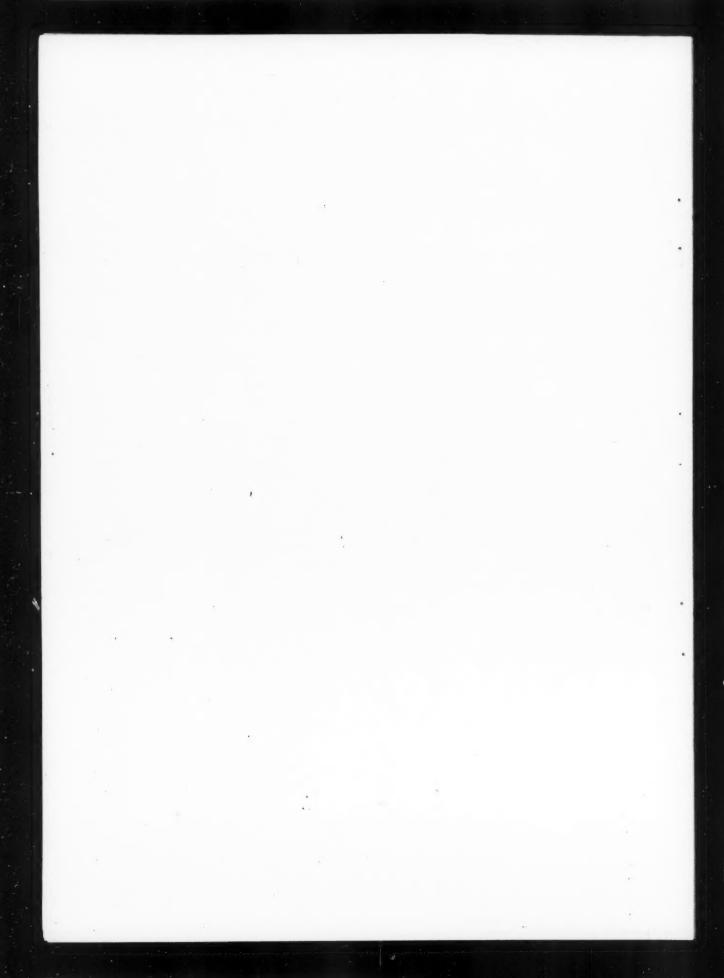
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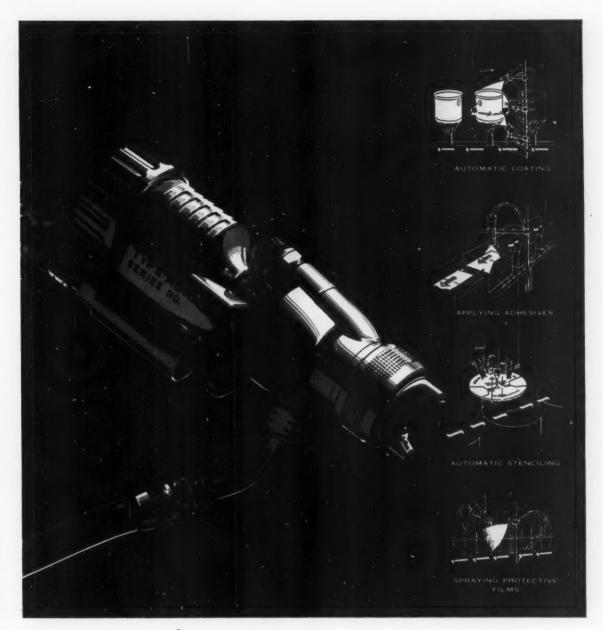




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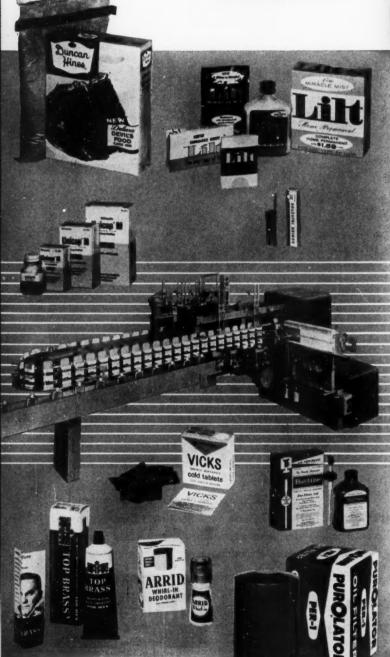
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WORLD

Abstracts from foreign packaging magazines*

GERMANY

Blow-molded PVC suggested for beer bottles

A patent for a blow-molded, disposable beer or carbonatedbeverage bottle made of rigid polyvinyl chloride is described in a three-page article in Automatike (Germany). To accommodate internal pressure, the inventor has devised what might be described as an elongated globular shape pinched in at the middle. This configuration, he says, prevents "blow out" and provides a shape that is convenient to handle and saves space. He says these plastic containers could be made at a cost competitive with glass and has designed a molding machine for the bottle that would be integrated with the bottle-filling operation for in-plant container production. The bottles, it is reported in the article, would be sealed with crown caps.

Fast folding machine for package inserts

Folds as small as 9/16 in, wide reportedly can be made on a German-made, high-speed folding machine. Designed for the production of package inserts for the pharmaceutical and cosmetics industries, the machine will work with any type of paper, the report in Packaging News (England) states. The leaflets are withdrawn from a removable hopper by suction and transferred to serrated folding rolls. These are ground to absolute concentricity and mounted in springloaded roller bearings to equalize the pressure applied to both sides of a folded sheet. The folding plates are made from nickel-plated rods to permit the handling of very soft or thin papers, and they have both coarse and micrometer-fine adjustments for control of folding lengths. Up to four parallel and four right-angle folds can be applied to each sheet, which can be as large as 81/2 by 113/4 in. or as small as 2 by 214 in. The sheets are conveyed from one folding unit to the next by means of a table with diagonal rollers that automatically register and guide them forward.

ENGLAND

Conference on Odor-in-Packaging

Long-term research must be done on the problem of odor before it will be minimized, it was concluded at the close of the Odor-in-Packaging Conference organized by the Institute of Packaging in England. The Institute of Packaging Interval points out that there is a great deal that both users and suppliers (of packaging) can do to improve the present position. Action has already been taken to put the findings of the conference to practical account. An "action committee," formed to draw up a program of work, summarized the conference findings this way:

1. Where oxidation drying oil inks were concerned, the majority of the precautions which could be taken to minimize odor were already fairly well known and were in fact

summarized by the conference.

2. With regard to solvent resin base inks, the problem resolved itself into one of drying the ink film and appeared to be to a large extent an engineering problem, coupled with a requirement for more knowledge on the fundamentals of drying films of this nature.

3. The majority of the base materials—paper, board, film, foil, etc.—used for packaging did not give odors of an objectionable nature unless something had gone wrong with their manufacture or, alternatively, they were made

from materials that were, of course, odorous in the first place.

 Fundamental research on the physiology of olfaction and the classification of odors was required. This involved long-term research of an academic nature.

5. A standard procedure for examining material for odor and taint should be drawn up and agreed upon by all concerned. The use of the gas-chromatographic method, outlined by representatives of the Metal Box Co., Ltd., at the conference, could well be investigated.

Plastics caps to cushion tablets

Some improved constructions for plastics cap-closures designed to be used on bottles, vials and tubes for the cushioning of tablets are described in Packaging (England). A "petal" style of closure has been modified to incorporate small nibs at the base of four of the "petals." The nibs cause the petals to curl inwardly after insertion of the stopper, overlapping like rose petals, so that they provide all-over cushioning and support for goods which are tabletted in diameters less than that of the tubes. A spiral, spring-type stopper, originally offered with two coils supporting a ring, has been modified so that the ring is now furnished with inturned prongs and small tablets cannot slip through to block the spring action. Several new styles of prongs for these circumferential-fin closures are illustrated in the article.

Pickle jars in cellophane multipacks

Single sheets of transparent cellophane, a little more than 0,001 in. thick, are being used to hold together six glass jars of pickles with a total weight of 25 lbs., it is stated in Merchandising Vision, publication of British Cellophane, Ltd. Similar packs are being used for smaller jars of pickles, bottles of orange and black-currant cordial. A sheet of PT 400 cellophane is placed on damp sponge rubber in a tray. The jars or bottles, standing on a base of corrugated board, are placed on the sheet, which is thoroughly moistened so that it shrinks around the jars, locking them firmly together to prevent movement. The overwraps are sealed with strips of adhesive paper. During a year's experience with this kind of packaging, not a single jar has been broken, according to the report.

Water loss-pre-packers' problem

The Weights and Measures Bill now in passage through the Parliament in Britain is raising questions among produce packagers in England. Certainly the public must be protected to the fullest extent, says Produce Packaging (England). "But with goods that lose weight continuously and unavoidably by evaporation, some criterion should surely be introduced in defining the quantity purveyed to the buyer. If 15 brussels sprouts or 60 blackberries are made up in packages which weigh 1 lb., can there be said to be a lesser quantity of sprouts or blackberries three days later when the same number of fruits and vegetables are contained in the packs?" the editorial asks, "It is absurd to say that their quantity is less and yet, of course, this must be so in terms of weight. What has happened is that the quantity is the same, but it has lost a small amount of water vapor. If the weight of produce filled into packages is strictly enforced at the packing point, the housewife

*For additional information, write: World Report Editor, Modern Packaging, 770 Lexington Ave., New York 21.

World Report* [Continued]

will be guaranteed complete protection against all but a little moisture loss. Surely she is not worried by the loss of an ounce or two of water, since in any event this will be more than replaced if the produce is to be cooked. A net-weight-when-packed basis is the only practicable and efficient means of consumer protection which will not drastically retard pre-packaging development and add a burden of cost to the consumer," the editorial concludes.

Special method for measuring type wear

A technique that involves engraving small grooves in type metal and examining the profile of the grooves microscopically at stages in the run, as a means of measuring type wear, is described in Patra News (England), publication of Printing & Allied Trades Research Assn. In the experiments, 0.0015-in. grooves were cut in units of three type metal alloys (linotype, monotype and founders type). Easily removable units of the three alloys were included so that they could be weighed from time to time to check the amount of metal worn away. Casts of the grooves were made in softened plastic, which were left to harden. These replicas were made at various stages of a test run-from 250 impressions in eight further stages up to 93,000 impressions. After each stage the groove profiles were photographed. Weighings were also carried out at various stages. As wear progressed, the shoulders of the grooves became rounded. From the change in shape, a numerical expression was used to measure the amount of wear. Results are reported in a Patra laboratory report. This concludes that the technique is particularly suited to the comparison of type alloys and shows up the effects of pressure and also would be useful in comparing different papers.

PVC bag-in-box replaces vinegar casks

British Vinegars, Ltd., has adopted a disposable 4-gal., fibrehoard box supporting a bag of polyvinyl chloride film to replace heavy, expensive, returnable casks for vinegar that required costly cleaning and maintenance. Film bags are equipped with integral taps made of molded polyethylene for bung section and polystyrene for the spout. Walls of the container are made of 0.009-in.-thick polyvinyl chloride film, but 0.012-in.-thick material is used for making the top and bottom.

Soap in window cartons

A full line of Morny toilet soaps, comprising a dozen different fragrances and colors, is now being packaged in individual window cartons and this packaging is expected to be extended to bath-size bars as well. Formerly, according to Sales Appeal (England), the bars of soap were packaged unwrapped, three to a display carton. Although customers were not encouraged to buy single tablets, many retailers had to break the multiple-unit packages, with resulting damage to the soap and broken-up units. The individual cartons, whether merchandised in threes or separately as individual bars, save wrapping time and reduce incidence of damaged product, it was stated.

Printed flock on aluminum foil

A supplier of decorative box coverings has announced an interesting new method of printing instead of spraying flock on the surface of embossed, tinted aluminum foil. According to Packaging News (England), the flock-free areas gain brilliance by contrast with the velvety surface of the flock. In another flock-printing development, unusual effects are said to be produced by spottering the flocked surface with minute disks of foil in various colors.

FRANCE

Magnetic conveying systems

Various embodiments of magnetic conveying are described in Emballages (France). The equipment is capable of transporting open-top cans and transferring them to a similar conveyor which handles them in a reversed attitude, such as used on can-washing lines, where containers must be drained. The magnetic system may be used for the transport of aerosol packages through the leak-testing water trough. The possibility of weight checking by magnetic means is also discussed in the article.

The magnetic device is given only a sufficient amount of magnetism to pick up those containers which have not been completely filled as the can flow proceeds beneath it. This results in eliminating automatically from the production line all cans which are incompletely filled.

Heat-seal cartons of rigid construction

A new kind of carton, supplied flat, provides a rigid heat-sealed construction with recessed ends, according to Emballages (France). The particular feature pointed out for this French development is an easy-opening, semi-perforated aperture which gives full access to the upper surface of the box. Simple equipment is available for setting up these cartons, which, because of their rigidity, are suggested for packaging products of a relatively fragile nature.

SWITZERLAND

'Paper' made of synthetic fibres

After years of research, a Swiss firm has developed a "paper" made entirely of synthetic fibres suitable for packaging, according to Packaging (England). The development is noteworthy, it is stated, in that "until recently all experiments in this direction failed because it proved to be impossible to form a serviceable web." Although no packaging applications are reported as yet, the new "paper" is said to have properties superior to best grades of rag paper—unusual degree of wet strength, tear strength and resistance to acids and solvents. Drop tests using sewn sacks filled with sand and subsequently immersed in water for 60 min. showed that the seams burst due to breakage of the thread, but not the synthetic paper.

INDIA

Salute to India's new packaging publication

First issue of Perfectpac (India)—well edited and illustrated, on slick paper, with well-designed format—is significant of the spectacular advance in India's marketing techniques and interest in packaging development. Guest editorials discuss the country's economic and merchandising problems, with emphasis on packaging requirements. The purpose to make the new publication a forum for the clearance of packaging information is presented by the publisher and editor. Helpful articles cover such subjects as the need for packaging research, discussions of packaging materials and package forms, machinery and techniques, with generous space devoted to present-day packages on the market in India.

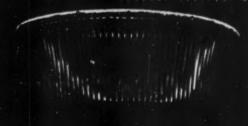
SPAIR

Emphasis on improved techniques

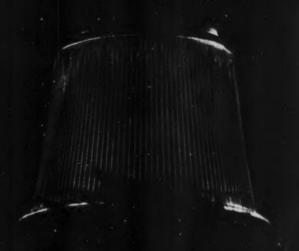
Increased attention to improved packaging materials and the protective aspects of packaging in Spain is indicated by the articles in the recent issue of Informacion de Embalaje (Spain). They include discussions of the requirements and possibilities of corrugated cartons, protection of food products in treated papers, water-vapor permeability of wax compounds and the use of molded pulp for shipping fruits. Also included is a detailed article on flexographic printing.

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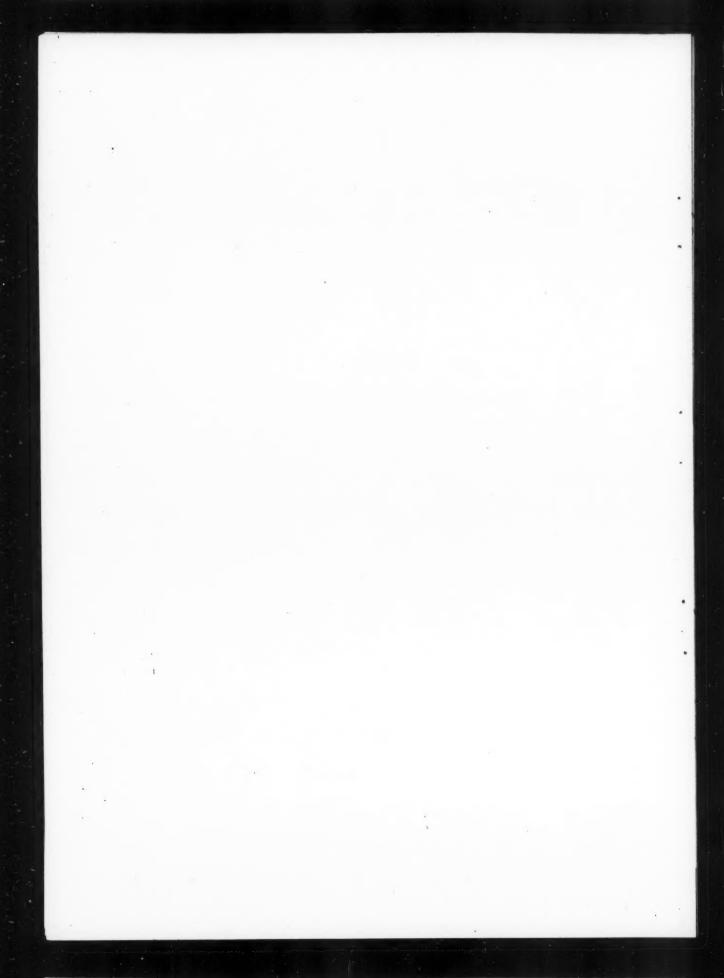
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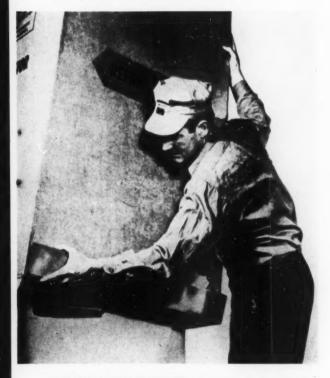
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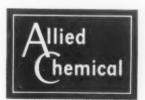


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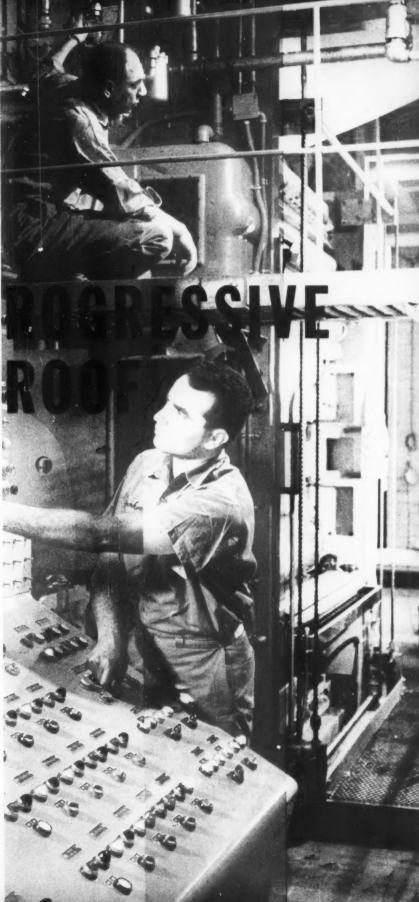
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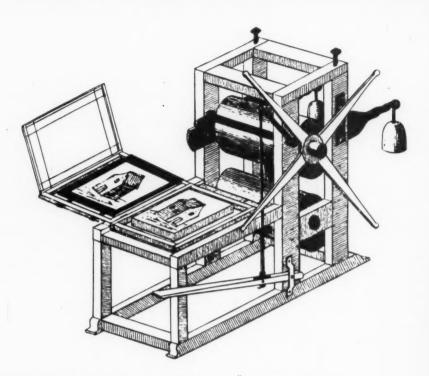
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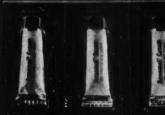
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EDITORIAL MEMO

For value to be received

There is increasing question about the cost of trade shows—not only among exhibitors, but among audience companies that must justify the time and expense of numbers of key personnel attending. More and more, the question is asked: "Is this one really necessary?"

Fortunately, that question is readily answered for the two national packaging shows on our calendar this year. The 30th AMA National Packaging Exposition, opening in Chicago this month, provides an annual review that is essential to anyone seriously interested in packaging. The biennial Packaging Machinery Show, coming in November in Detroit, has proved equally vital to everyone concerned with the production phases of packaging.

But the question remains of how to get from these shows the greatest return possible for the cost of attending. We like the program which has been outlined by Mr. W. F. Rockwell, Jr., president of the Rockwell Mfg. Co., in one of his recent *Rockwell Reports*.

For many years, the Rockwell company has followed the practice of holding breakfast meetings, prior to and during such industry tradeassociation events, for all of its attending people.

"This," says Mr. Rockwell, "gives us the opportunity to review with them the changing nature of the industry and of our business, to highlight those features of the meeting we feel are of particular interest. We encourage each man to plan his activities before the convention gets under way, to plan attendance at key meetings and functions, to contact key customers and prospects, to review his knowledge of every important matter that is likely to present itself during the convention.

"In other words, our attitude on trade shows and conventions is exactly the same as it is in any other area of our business. If the job is worth doing at all, it's worth doing in such a way that the company will derive the greatest benefit. It cannot be justified on any other basis."

Whether it's an exposition or a convention, whether your company is a participant or a visitor, those words are worth pondering. Both of this year's big packaging shows are appearing in glamorous new settings, in brand-new exhibition balls. Let's not let the excitement distract us from the true value of each of these outstanding events.

You can start your planning now, with the details of the AMA show in the article starting on p. 188 and the special MODERN PACKAGING Show and Conference Guide inserted under the front cover of this issue.

The Editors

NEW ADDRESS: Executive, Editorial and Advertising headquarters offices of Modern Packaging are now located in our new building at 770 Lexington Ave., New York 21, N. Y. Telephone and teletype numbers remain the same: Phone PLaza 9-2710; teletype, TWX-NY 1-3063. Cable address: "Breskinpub, New York."

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MODERN PACKAGING

Effective package copy

It's the small type, often overlooked in package design, that can make or break customer satisfaction. Others can learn from successful packagers who have developed copy techniques to a fine art

In the fiercely competitive race for stand-out brand images and stronger shelf impressions, an aspect of packaging that too rarely comes up for serious discussion is preparation of effective package copy the descriptive matter and directions that appear on back and side panels, usually in small type.

Every packager should know that no area of packaging is more essential or requires more skills in the planning than does this.

Day in and day out, the success or failure of a product depends ultimately on how clearly the wording of package copy—among the most widely read wording in every-day living—comes through to the consumer. And with the endless flow of new products on the market, presentation of this information looms continually more important as a factor in the total marketing complex.

Packages for new convenience foods with which consumers are unfamiliar must tell everything about the product and how to prepare and serve it.

To use simple tools, a generation of do-it-yourselfers must often have instructions on the package which an old-time handy man would have considered entirely superfluous.

And with the almost complete disappearance of personal service in today's retail outlets, there is no other way for a shopper to find out how to use a product except from the package itself.

In a recent study by the Better Packaging Advisory Council, 18,000 shoppers were asked what they want to find out about a food product from its label. The most often mentioned questions were:

- How do I use the product?
- Are there other ways to use it?
- Are there recipes?
- Does the manufacturer offer more information about the product on request?

And after examination of supermarket shelves, the council's study concluded that labels on 74% of dairy items, 89% of pre-packed fresh meats, 99% of pre-packaged produce and 66% of baby foods were deficient in the above information.

In the light of these considerations, it is time to take a look at some of the new techniques emerging for the handling of such copy. Much can be learned by observing ideas in several important product fields. And there are few packagers who will not profit by ideas which have been adopted for products totally unrelated to their own.

Another advantage is involved, too. Measured in terms of millions of exposures, the promotional values of secondary surfaces on packages are also

Three women are responsible for the writing of all directions and recipes on General Foods packages. Success of the company's products in the hands of the consumer depends on their skill of interpretation. They handle something like 800 package changes a year. Left to right: Sallie Watt, supervisor, packages and recipes; Edith Briggs, packaging editor; Edna W. Kestel, manager, GF Kitchens editorial services, are shown here discussing Swans Down package layout.



coming in for closer scrutiny. One service organization, recommending the printing of selling messages on the millions of now unprinted carton end flaps, estimates that 25% of the space on packages is still wasted. "There are 14,000 known uses for salt," says the head of this organization, "yet how many of them have ever been used on the now-wasted space of salt packages to sell more salt?"

Every packager should take time out to reevaluate secondary package surface treatment. He should ask himself such questions as these:

- Is all the secondary copy now on the package performing a selling function?
- Does the layout make the most judicious use of the limited space available?
- Is direction copy written in the simplest every-day language?
- Which is more effective for the proper use of the product—narrative-style description or step-bystep directions?
- Are the type faces and sizes easily legible?
- Would the use of more "how-to" illustrations clarify instructions?
- What copy changes could be made to improve direction copy printed on the package?

- Are we using to best advantage the many graphic devices and color treatments available to obtain the desired emphasis?
- Is there space for additional sales messages?
- Are testing and research procedures adequate to back up the informational copy?

Extensive testing must be done by food manufacturers before they can state on a package, for instance, that a cake mix must be baked at 350 deg. for 35 min.; by a sewing-supply firm before it can tell a consumer how to sew in a zipper, or by a hardware manufacturer before he can tell a do-it-yourselfer how to install a door closer.

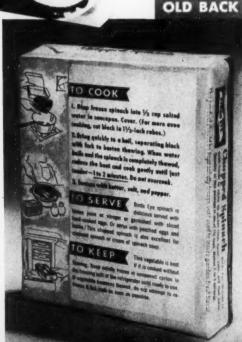
Food-copy standards

So far, perhaps, the highest degree of editorial technique for this aspect of packaging has been developed in the food industry.

General Foods. While objectives in all food-manufacturing concerns are similar, discussion of the long-established organizational set-up for this packaging activity in General Foods Kitchens should provide a helpful example to show the depth of planning involved before it can be stated, say, on a package of Birds Eye frozen spinach: "Use ½ cup



Color thumb notches to emphasize most essential points and narrower-measure copy blocks that allow more white space make for easier reading by the consumer of the recently revised wraps for Birds Eye spinach.





In sewing laboratory at Coats & Clark, directions for sewing in a zipper are written by staff editors from actual step procedures developed by staff home economist. Package-insert copy is reviewed periodically to make instructions easier to use. Even persons inexperienced in sewing are asked to sew in zippers, using the instructions as a guide, to test the clarity of the directions.



of water; cooking time 1 to 2 minutes; cooking begins when water boils and spinach is thawed."

With a staff numbering 135 young women—60 of them home economists—General Foods Kitchens functions are divided into five separate phases of operations: (1) Product Representatives, (2) Test Kitchens, (3) Editorial Services, (4) Publicity and (5) Consumer Correspondence.

All package direction copy is prepared by Editorial Services. In this department there are two young women who, under the direction of the department manager, devote full time to packaging. They write all preparation directions, arrange illustrative material, fit copy to space and check all proofs. In a year they handle 800 new packages and package changes, counting all flavors, varieties, package sizes, etc. At their service are the entire resources of the test kitchens to validate the statements and a library of more than 17,000 tested consumer recipes and 1,500 tested quantity recipes for the institutional trade,

With today's emphasis on improved graphic presentation, Editorial Services now works more closely than ever with the package designer, much as an editor of a publication works with the art department. Before any layouts are made, the package copy is written in preliminary form so that the designer has an advance guide to how much text will be involved and can allow for it. After layout approval, the copy is returned to the editor to be adjusted for space and is watched through the entire production cycle to the okaying of final proofs.

The significance of the packaging functions per-

formed by General Foods Kitchens is indicated by the check points for which it is responsible, on the corporate "request for package endorsement" form:

Ingredient data.

Net weight.

Product name,

Vitamin minimum requirements.

Product claims.

Recipes.

Directions for use of package or product.

Photos or artwork portraying use of product.

Use of GF Kitchens Seal.

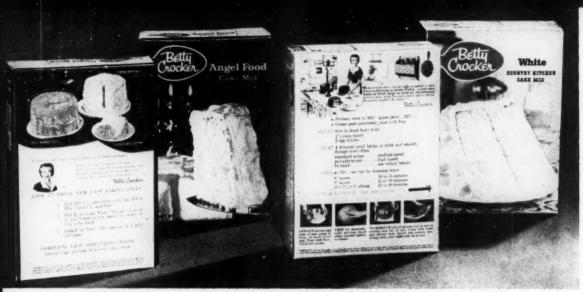
Package construction or size.

Nutritional claims,

Before any direction copy is written, every product is tested in the kitchens and directions are developed. It sometimes takes many tests before package directions are perfected. Efficient product performance is further assured by GF's homemaker testing service, maintained in Washington, D.C., where a population that is representative of all parts of the country can be called on in place of customary country-wide consumer panels,

The results of this kind of planning are to be seen on many present General Foods packages—well-spackd, easy-to-follow, step-by-step preparation directions, sometimes illustrated with color photographs of the various steps; arrangements that eliminate the effect of crowding; more effective use of color, reverse printing and special type devices to gain emphasis; tabular arrangements as quick guides to quantities related to number of servings.

An example of the infinite care taken to assure



Colorful photos on back panels are aimed at easier and more efficient aids to product preparation on Betty Crocker cake-mix packages. Large red lettering serves for lead-in to text. Much attention has been given to back-panel illustrations that continue the "mood" expressed by face-panel illustrations.

successful preparation is a printed line in all-caps, just added to the copy on Minute Sliced Potatoes, "Before using in recipes, cook potatoes as directed," to make doubly sure that homemakers will not try to use the potatoes without cooking first,

Standard Brands, Back panels of Royal Gelatin packages were recently revised to add a recipe which replaces a long description about the nutritional value of vitamin C, which Royal Gelatin contains. Since most consumers are now familiar with the advantages of vitamin C, the vitamin reference has been shortened to include only the daily requirements supplied by Royal Gelatin and has been moved to a small block of copy at the upper right. Direction copy has been made more legible by the use of a less-condensed sans-serif type. More

Chart layout is used successfully as promotional idea on carton for Pond's Angel Face Fashion Case to present a "costume complexion shade selector" to match powder shades with costume colors and skin tone.



prominence is given to the "quick-setting" direction by printing a lead-in line in color. And because women are known to need instructions for unmolding gelatin, this information has been rewritten in fewer words, easier to follow. Better flavor identification is provided, too, by the use of small illustrations of the fruit on four surfaces of the carton.

Recipes on Standard Brands Blue Bonnet Margarine packages are printed within an outline form of a standard-sized recipe file-box card that homemakers may clip and keep for permanent reference.

The Borden Co. At the Borden Co. package copy and layout are supervised and accomplished by the product managers with the assistance of the Borden Kitchen and, in some instances, with the assistance of package designers and advertising agency.

The trend to improved presentation is seen in Borden's colorful new series of Starlac cartons, all the faces of which present the same format showing a glassful of the reconstituted product, but accompanied by different color illustrations of recipes that can be made with this non-fat milk—a chocolate cake on one, cookies on another, a piece of pie on a third. On the back panel are recipes for these items, Sell copy about why you should drink Starlac and basic directions for reconstituting it, plus yield information, are given prominence in two of the colorful oval-shaped graphic devices used for emphasis.

An unusual way to tell customers how to use a package was found when Gail Borden Natural Cheddar cheese was introduced. For protection, this product is sealed in wax, overwrapped with saran film. During the planning stages, it was determined that the easiest way to cut the cheese was to slice it right through the package, replacing the end cover-

ing of wax and saran film to keep the unused portion fresh. A line drawing and instruction copy on the side of the package illustrate how this is done and printed guides along the edge of the package are provided for cutting evenly measured slices.

General Mills reports the reasons behind the copy on three Betty Crocker packages, which should be helpful to packagers with similar problems. The Betty Crocker Kitchens prepare directions with the help of Products Control and Research Departments. And the Editorial Department checks and proofreads all directions and recipes.

This company's white-cake-mix package shows the significant trend to pictorial treatment as an easier and more efficient aid to product preparation.

Large red lettering serves for lead-ins to basic steps the homemaker is to follow, accompanied by pictures and easy directions on how to grease a pan, how to test a cake for doneness and how to remove the cake from the pan to cool. Also included are special directions to be followed in high altitudes.

When a cake mix is first tested, says General Mills, ingredients, mixing methods, baking times and temperatures are varied, each separately, to determine what might happen if directions are not followed accurately. In this way, Betty Crocker Kitchens can tell why a homemaker has a failure. Many homemakers who have used the cake mixes send in samples or descriptions of their failures.

It was this type of consumer mail that led to changes in package directions for Betty Crocker Angel Food cake mix. Some of the directions are now emphasized in italics because these directions must be followed closely to guarantee perfect results. Also little warnings like "Be sure all utensils are free from grease" and "Do not use a plastic bowl" have been added to the instruction copy.

Once a General Mills product is on the market.

it is tested constantly to make sure that the product continues to measure up to the standard set. Homemakers who take part in the tests fill out a questionnaire and send a sample of the product they make. These tests are conducted by the General Mills Marketing Research Department.

The need for package-copy change when the form of a product is changed is illustrated by what happened when General Mills hit upon its packaged pie-crust mix put up in quarter-pound sticks like butter. Acceptance was good in original test





Front and back panels match up food illustrations with three recipes to make the potato dishes illustrated on Borden's Potato Slices package—a new idea in copy arrangement for easy reference by homemaker.

Cutting directions are illustrated with drawing and copy on top of Gail Borden Natural Cheddar Cheese so that the consumer is made aware of easy way to slice through wax coating and saran wrap, using wax-and-film end to keep unused portion fresh. Guide lines facilitate cutting of evenly measured cheese slices.



markets, but as soon as the stick pastry hit the national market Betty Crocker began getting letters. Women said they did not like the product so well as the old free-flowing kind. But the company knew they would like it if they learned to use it correctly. Hundreds of home calls were made to see what women were doing wrong. Directions on the package were rewritten to make certain points clearer. This change in copy was accompanied by step pictures in ads and in television commercials. It paid off. The tide was turned and letters began pouring in saying. "The best pastry ever made."



Suggestion to clip and keep recipes for permanent reference is provided on Blue Bonnet Margarine package by printing recipes inside an outline form of standard-size recipe file-box card.

Non-essential information about vitamins make way for easy-to-read, useful recipe on small Royal Gelatin package. Direction copy has been revised to emphasize quick-setting feature. An illustration of fruit on four panels of the carton makes for quicker flavor identity.



Procter & Gamble. Five principles followed by the designers of Procter & Gamble Duncan Hines packages are: (1) to separate basic recipe information from variant recipe ideas so that the consumer is not confused in finding basic directions quickly and clearly; (2) to advise the consumer to assemble everything she will need for preparation in advance, (3) to present the information clearly as a step-by-step process so that preparation is done in correct order; (4) to use a consistent type face for directions that differs markedly from that used elsewhere on the package, and (5) to separate the various preparation steps with color flags or some other kind of emphatic graphic device.

Sewing supplies

Packagers in any number of non-food categories could take a tip from the careful planning that is done on the packaging of sewing supplies.

Coats & Clark maintains a sewing laboratory comparable to the test kitchens in the food industry. Here all products are tested and new ideas for use are developed, such as new decorative possibilities for Bondex—a hot-iron fabric for decorating and mending. All instructions and directions are written by women editors experienced in this specialized type of copy writing. Directions for sewing the company's zippers, for example, are written from step procedures developed in the sewing laboratory. Before printing the instruction inserts that go in the tiny cylindrical polystyrene containers or the blister packs the company now uses for zippers, a number of persons inexperienced in sewing are asked actually to sew in a zipper by using the instructions. All directions are reviewed periodically relative to consumer reactions to see if they can be improved. Through its educational work in schools and colleges, Coats & Clark also has a vast wealth of information about what users like and dislike.

Line drawings are used generously by Coats & Clark to make directions clearer. Just recently all insert instructions for zippers were completely revised in size and format so that the same-sized insert can be used interchangeably in both types of zipper packages—polystyrene cylinder and blister pack. Since the new insert, which is printed both front and back, is made smaller to fit the blister package, the company reports it has effected a considerable saving in paper costs and large-quantity purchase of printing.

Illustrating how instructions can be improved is a revised direction insert for a zipper designed for men's trousers. Because these zippers are produced in one standard length, the consumer must cut them to fit each individual garment. When it was discovered that users did not understand how to cut



Complete information about snap fasteners on back of Clinton card shows how fullest detail can be given, even in a small space without crowding, when copy is carefully planned.

Do-it-yourselfers need directions on hardware packages that would have been unnecessary a generation ago. These Stanley packages illustrate what leaders are doing—copy, drawings and photos that tell what a product is for, how to use it.

the zipper when a shorter length was required, the copy was revised to emphasize this point and a picture was added showing the zipper with scissors.

Hardware

Spokesmen for Yale & Towne and Stanley Tools Div. of The Stanley Works point out the need today for instruction and descriptive copy on hardware packages which, they say, would have been unnecessary a generation ago. The reasons: (1) growth of self service in hardware outlets with little or no clerk service to explain how to use a product and (2) the increasing millions of householders who are amateur plumbers, carpenters and painters.

In this field, apparently, copy planning is usually the function of the advertising and sales-promotion departments with the assistance of the engineering department for technical detail.

"Very definitely," they say at Stanley Tools, "we must provide more 'how-to-use' information on the visual packages sold through our departmentalized self-service display." And the company mentions as examples the suggested uses listed on the card for utility knives; directions and "how-to" photos on a card for a ball-joint sanding attachment used with an electric drill; instructions on a cardon telling how to put a replacement blade in a metal tape rule; the listing on the package of materials suitable to use with a certain scoring tool and drawings to show how to use it.

Agricultural products

Packages for veterinary products and agricultural chemicals must include complete information for the farmer who must find out for himself exactly how to use them.

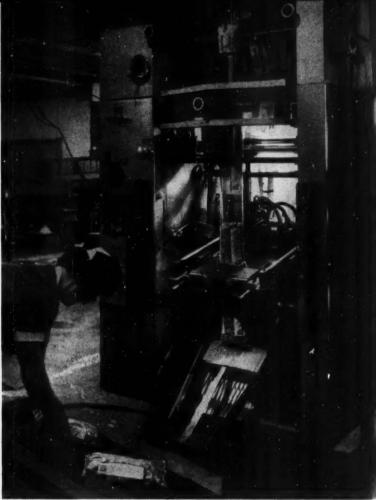
An idea of what is involved is contained in a packaging manual prepared by a leading design firm for American Cyanamid's agricultural line.

*See "New Day in Hardware," Modenn Packaging, Feb., 1961, p. 83.



The manual specifies that directions for use must be stated in simple practical terms, avoiding grains, grams, cubic centimeters and kilos where these measurements are apt to be unfamiliar to the user. Teaspoonsful or cupsful are suggested instead. Yield of contents, it is stated, will best be expressed in terms of number of acres or number of animals that can be treated. Tabulated or blocked-off instructions for mixing or dosage are recommended. The manual points out that it is advisable to state at the outset whether the product treats, cures, promotes or inhibits, [Continued on page 298]

New pouch packer with crankoperated drawbar steps up speed of forming, filling and sealing 1%-lb. and 2-lb. polyethylene bags of loose-frozen vegetables. Now running at 50 pouches per minute, the machine operates year-around at Seabrook Farms plant.



Faster form-fill-seal

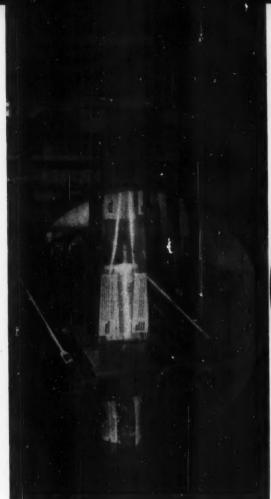
Seabrook Farms pioneers
use of new pouch packer
with a rocking drawbar
that jumps output
of loose-frozen vegetables
in polyethylene to 50 bags per minute,
while holding a tight seal

o satisfy the growing market for loose-frozen vegetables in polyethylene bags*, food-company production men have been looking for a form-fill-seal machine with more speed, efficiency and flexibility—prime requisites for a packaging operation that must be performed at the lowest possible cost while encompassing the many variables in products, in packaging films and in operating conditions.

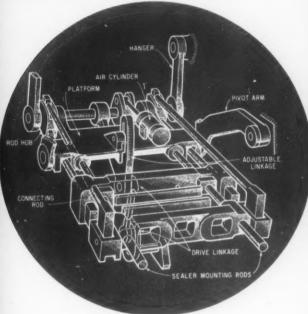
Now running at Seabrook Farms, Bridgeton, N.J., is one answer to their search—a new form-fill-seal unit with a new spring-counterbalanced, crank-operated drawbar that operates on 2½-mil roll-stock film at 50 bags per minute in both 1½-and 2-lb. sizes—a rate equivalent to 120 to 160 standard 10-oz. packages per minute and a notable achievement in polyethylene packaging.

Equipped with a simple and fast volumetric filling head, the machine handles such diverse individually frozen products as peas, corn, cut green beans, lima beans, mixed vegetables, and mixed

^{*} See "Spring Kist Bagged Frozen Foods," Modern Packaging, March, 1961, p. 102.



Rocking drawbar that supports heat sealers is pivoted on two side arms and supported at rear by two hangers, as seen in this close-up photo (left) and special drawing (below). Adjustable linkage (center in photo and drawing) permits quick change-over for bags of different size. The heat scaler is actuated by connecting rods that work from toggles on rod hub (rear).

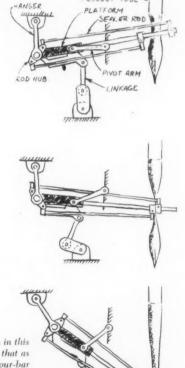


PRODUCT TUBE

peas and carrots. Through an adjustable drive linkage, the machine can quickly be changed over from 1½-lb. bags under Seabrook's Snow Crop label to 2-lb. bags in its Deerfield brand.

Company officials note that when their bagged products were first introduced two years ago, retailers were so anxious to handle the new frozen-food package that they accepted a fairly large incidence of bag breakage as part of the tribulations of package development. But today, retailers object strenuously to such breakage, since even one broken bag of loose-frozen vegetables can make a great mess in a freezer cabinet. Hence, engineers from both the machine supplier and Seabrook have made strong and successful efforts to perfect heat sealing of the film on this new machine.

The problems have been intricate. For example,



Machine action and its advantages are shown in this sequence, sketched from the running machine. Note that as the drive crank pulls the drawbar down, the four-bar suspension (hangers and pivot arms) keeps a straight pull on the film tube (at right), which prevents distortion of the thermoplastic material. During the action, heat sealer is first closed, then opened by toggles on rod hub (rear).



Strong heat seals made by controlled action of new pouch packer, enable large bags of loose-frozen vegetables to be stored and handled under low-temperature conditions without breaking. Bags are cut open to remove part of contents, then tied for restorage in freezer. Seabrook Farms packs loosefrozen vegetables under both Deerfield and Snow Crop brands.

frozen foods carry a lot of moisture and they chill adjacent metal surfaces, which leads to localized condensation of moisture from both the product and the surrounding air. It takes only a small amount of moisture to interfere with the heat sealing of polyethylene film and also to form ice in the filling tube and so prevent product flow. Conversely, heat build-up in impulse-sealing mechanisms and variations in voltage, air pressure or water temperature can disturb the delicate balance of time, temperature and pressure which is necessary in the sealing of a thermoplastic film.

By its very design, the new machine solves some of these problems. And the others have been largely worked out with later modifications. Since Seabrook started the unit, its output has been raised by on-the-spot improvements in mechanics and film to the present speed of 50 per minute.

In basic design, the pivoted and crank-driven drawbar delivers a smooth stroke and a straight pull on the film, which prevents distortion of the web. A new longitudinal sealer, mounted on a hinged gate and activated by a cam-lever linkage, permits closer control of time, temperature and pressure than would a drag-type sealer. And a heater—installed between the outer and inner walls of the film-forming and product-feed tube—prevents moisture condensation on the outside and ice build-up inside during the humid summer months.

The pre-feed roller on the web feed is connected to the drawbar and pulls the required amount of film from the roll during the off cycle, thus preventing the polyethylene film from being stretched and permitting faster machine action. Also, a fourbar suspension system on the drawbar produces a straight pull on the film and prevents distortion.

To keep other variables under closer control, Seabrook has installed a special transformer on the power in-put to hold voltage constant. And a booster compressor added to the air system holds an even pressure. A special refrigerating unit for the water supply maintains a constant temperature.

Even with these measures, special modifications were necessary on the scaling heads to get the tight cross seals which hermetically close the bags. Following customary design, the machine was delivered with a wide impulse heat-scaling band on one water-cooled jaw that mates with a second jaw surfaced with silicone rubber. The scaler is split across the center and a hot-wire cut-off is positioned in this center gap in order to divide each of the bags from the web as it is finished.

But this widely used system did not work in this application because, engineers theorize, at the high speed of machine operation, the cooling system was not adequate to remove residual heat fromthe impulse band and the small clearance between the cut-off wire and the sealing bands may have cocked the bands slightly and stretched the film at the center point of the longitudinal seal.

This problem was corrected by increasing the bore of the water-cooling passage in the back-up jaw and replacing the large sealing band with two smaller ones, spaced well apart. With additional improvements in the control of film gauge by the suppliers, Seabrook is now able to heat seal the bags with a high degree of control.

Since both sizes of bag vary only in length (13-in, cut-off for the 2-lb, bag, 10½ in, for the 1½ lb,), a change-over between the bags involves only a simple adjustment of the variable drawbar linkage and of the volumetric filling cups.

The problems attending the run-in period for this machine point up the complexities in handling a thermoplastic film, particularly in new applications. Only the low cost and desirable physical properties of this film have justified the trouble, as one Seabrook official puts it, "of pushing the technology of sealing polyethylene film to its present limits." Since the bags cost about one cent each and the film is said to give an almost indefinite shelf life as long as the product is protected from light, the results seem to be worth the effort.

Supplies and Services: "Transwrap Model S-750" form-fill-seal machine by Package Machinery Co., East Longmeadow, Mass. Printed polyethylene film by Continental Can's Flexible Packaging Div., Mt. Vernon, O., and Milprint, Milwaukee 1.

Food Law under moratorium

March 6 deadline of Additives Amendment passes without final action by Congress on extension, now limited to 39 months, but F&DA promises there will be no prosecutions in the meantime

As of the March 6 legal deadline for compliance with the 1958 Additives Amendment, food packagers were operating in a state of legal limbo.

An extension bill urgently requested by the Department of Health, Education & Welfare was taken up by the House Commerce Committee Feb. 28 and—after changes—was reported out to the House Rules Committee on March 3. As the March 6 deadline passed, it still awaited floor action in the House and, after that, the full procedure in the Senate. Since the bill (HR 3980) was strongly backed by HEW Secretary Ribicoff, there seemed little doubt that it would eventually be signed by President Kennedy, possibly by the end of March.

Meanwhile, packagers had only the verbal assurance of Food & Drug Administrator George P. Larrick that, pending final Congressional action, no one would be prosecuted for technical violation of the 1958 law, which forbids the use after March 6 of any packaging material containing a chemical that may migrate to the product unless formal clearance has been given by F&DA.

After a stormy public hearing by the House Commerce Committee, the situation looked like this on the March 6 deadline date:

The "open-end" extension that F&DA wanted
 —without time limit—apparently was out, because
 of opposition from anti-additive Congressmen, but

 Packagers and suppliers who already had started tests on materials, or had requests for extensions now pending, would probably get a 39month grace period in which to complete their tests —until June 30, 1964—and

3. During the "lawless" period between March 6 and the time the new extension is passed and signed into law, Commissioner Larrick promised to keep all present extensions in force, including

4. Important petitions on major packaging materials. Regulations on cellophane, polyethylene and can linings are expected at any time, though a recent hassle over test data on polyethylene coatings used in boil-in-the-bag applications has delayed action on this material. The latest word was that

boil-in-the-bag use of polyethylene would be excluded from the general regulation and extended for separate action later.

The "open-end" proposal would probably have been accepted but for the opposition of Rep. James J. Delaney (D., N.Y.), author of the strict "cancer" clause in the 1958 amendment. He strongly urged that the extension be made for no more than two years, with another review after that period.

Compromise on extension

Well aware of Delanev's influence the is a member also of the Rules Committee), Commissioner Larrick and Secretary Ribicoff made no strong protest at the two-year extension suggestion, but did point out that if it were adopted the agency would probably have to appear at the end of that period again on a "crash basis." This led several members of the House Committee to propose that a three-year extension might be a satisfactory compromise. Larrick agreed that most additive clearance problems could be handled in three years. The extra three months are designed to push up any future legislation from March antil June, since some committee members objected to the March date, which necessitates action very early in the congressional session.

After the eventual bill is signed by President Kennedy, F&DA will issue regulations on how packagers and suppliers can file for the new extension. In the meantime, Commissioner Larrick has indicated that the law will not be enforced with respect to the hundreds of chemicals and packaging materials now awaiting clearance. At the latest count, almost 400 petitions had been received by F&DA; almost 200 are now under scrutiny by the agency.

The most important petitions, as far as packagers are concerned, are those pending on polyethylene, cellophane, can linings, adhesives, paper chemicals, waxes and rosin sizes. Regulations on the first three have now been drawn up and are making the rounds at F&DA for comments. They should be published soon, though no official will predict exactly when.

Burgermeister Burgermeister Burgermeister Burgermeister Burgermeister Burgermeister Burgermeister Burgermeister Burgermeister



Simple wrap-type multipacks for one-trip bottles of beer and soft drinks vary in details, depending on manufacturer, but all give maximum protection at low cost through ingenious construction and in-plant packaging systems. Burgermeister's wrap-around style enables stacking; partial end panels prevent glass-to-glass contact in shippers. Jax Beer and Dr. Pepper disposable carriers have die-cut grippers at base and inner partitions to cradle bottles.



WRAP-UP

S omething fundamental is happening in the big field of one-way bottles for beer and beverages.

Having scored their biggest victory yet with the new ultra-light, cone-topped throw-away bottle (familiarly called "the glass can"), the glass makers are now benefiting from new six-pack systems—boldly borrowed from the can itself—which take the six-pack problem off their own hands and put it into the bottling plant with, apparently, a considerable saving for all concerned.

Last year, the new standard one-way beer bottle (officially, the "Handy") had a greater rate of growth than any other single glass container in history. The increase was at the expense of both cans and the returnable bottle, which average about 20 trips to every one for a throw-away container. Still, the war between bottles and cans in the beverage field grows even hotter—and the new in-plant wrap for four-, six- and eight-packs is, without any doubt, adding fuel to the fire.

The simple wrap-around bottle for the standard six-pack, applied from flat blanks in the bottling plant, has caught on in many of the breweries and is now making headway among the soft-drink bottlers. Like most changes in traditional methods, it has created some problems, but the advantages have the edge. On the plus side:

 It rids the glass maker of the nuisance and necessity of stacking, setting up and filling six-pack cartons with empties—thus reducing handling costs.

It promises to simplify and economize on glass shipping practices by facilitating bulk movement of bottles on pallets without the use of re-shipper cases.

It reduces the packaging operations in the bottling plant by eliminating the unloading and reloading of cartons,

4. For beer, the wrap-around six-packs help to protect the sensitive liquid from deterioration by light and, with all beverages, the tear-apart construction of the one-way wrapper minimizes the tendency of consumers to confuse one-way bottles with the returnable bottles.

Such large soft-drink bottlers as Pepsi-Cola and Coca-Cola are now marketing or testing disposable special-mold bottles and are testing wrap-around carriers specially designed for these lightweight containers. Pepsi-Cola in this package costs the consumer about 0.8 cent per bottle less than it does for the same product in a can.

Other soft-drink bottlers—including Seven-Up and Cott Beverages—are using a recently introduced

FOR GLASS

Economical in-plant six-pack banding for the new one-trip bottles brings further cost saving for brewers and bottlers, and promises fundamental changes in glass shipping practices

squat one-way bottle (similar to the "Handy") and, in some instances, are utilizing both economical paper labels and the brightly printed wrap-around carriers to give product identification and also to add merchandising punch.

A half-dozen suppliers have developed wraparound machinery systems for use in bottling plants. Three of these are described in typical uses below.

The disposable, wrap-around multipack for bottles is essentially the same type of low-cost paper-

board band that has long been used for canned goods and even some cartoned products, and is a marked contrast to the cellular basket-type carrier previously used for most multipacked bottles.

In price, basket carriers average about \$45 per 1,000 in two colors, though some baskets have been produced for about \$29 per 1,000. On the other hand, wrap-around carriers cost about \$24 per 1,000 printed in two colors and in large quantity.

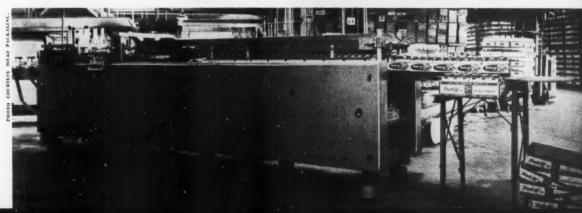
Thus, with the new wrap-around packs, a bottler

Seven-Up

Two locking tabs on base of six-pack carrier are employed to secure wrap; hold bottles firmly in place with neck holes at top and cut-outs at base of each bottle. One of the first major soft-drink firms to adopt the standard 12-oz. stubby bottle for non-returnable use, Seven-Up applies wrap-type carriers on straight-line machine at San Diego plant (lower photo) at speeds up to 130 six-packs per minute. Blanks are fed from magazine at left, then are folded down and locked under the bottles, as in picture of test machine at right.









Six-pack for beer in new "glass cans" also locks under bottles. Note separate insert of 40-point board (visible at end of carton between bottles in photo above). In multipackager (upper photo) bottles move from right through inserter and multipacker. Blanks are folded down over bottles, then locked. Inserter (close up at left) feeds blanks through folders, which form partitions, then tucks divider between bottles. Spring-loaded wheel at left then pushes divider into place.

now has a favorable cost differential over cans of from 3 to 5 cents per six-pack, whereas before he only broke even, according to figures from leading suppliers. It is estimated that the total cost of multipacking non-returnable bottles in the wrap-around carriers is from 22 to 24 cents per six-pack, compared with about 27 cents for cans.

Two basic types of wrap-around carriers are now in use: (1) the locking-style blank, fastened with die-cut tabs on the bottom, top or side and (2) the pre-glued sleeve, which is loaded from the sides and generally has partial- or full-flap ends.

The machines

Enough machinery is already available from various sources to handle the various styles of wraparounds at almost any desired speed—ranging from the semi-automatic units for introductory test runs, to the fully automatic machinery operating at 100 or more six-packs per minute.

For locking-type paperboard wraps, two types of machines are available from paperboard suppliers. Another machine for a side-lock blank is made by an independent machine manufacturer and supplied through licensees who make the blanks. Before the year's end at least four more suppliers are expected to have paperboard wraps and machines in use.*

One point concerning the machines now available is particularly worthy of note:

All were designed before the throw-away multipack for bottles was a reality, yet each was constructed with this capability in mind. Hence, these machines handle bottles with the same smooth flow and high speed notable for many years in the multipackaging of cans. And most machines will handle either cans or bottles, interchangeably.

Individual examples will document this point.

Seven-Up

One of the latest advances in the multipackaging of beverage bottles—and a significant one because of the size of the bottler—is at the Seven-Up Bottling Co. in San Diego. This plant has added the squat non-returnable bottle to its traditional

^{*}Container Corp. of America, Fibrehoard Paper Products, R. A. Jones & Co. and Olin Mathieson Chemical Corp.

slim, returnable-bottle line. Product identification is supplied by a wrap-around paper label, printed crown cap and wrap-around multipackage.

Applied by a 600-bottle-per-minute straight-line machine (Mead Packaging's "Rebel"), the wrapper is a locking-type band with open ends that allows the necks of the bottles to protrude through holes in the top. If the bottles were to be shipped out of state, the bottles, before entering this machine, would be grouped in sixes and would pass through an inserter attachment that drops a die-cut and folded piece of paperboard between the bottles to serve as the ICC-required cushion.

In the multipack machine itself, the die-cut blank is dropped over the bottles and folded down and under the containers by plows. The wrap is secured by four locking tabs, which are pushed by fingers through holes in the opposing side of the wrap. Bottles are held in position by the neck holes in the top of the wrap and by bottom die-cut flaps which grip the base of each bottle.

This package marks a major break for the sixpack and the one-trip bottle in the soft-drink market.

Pabst

Another type of locking-tab multipack is used by Pabst Brewing Co., Milwaukee. Also an open-end carrier with die-cut holes for the necks of the bottles, it is secured under the bottles with three heel-and-toe tabs, double locked to prevent shifting of the wrap. The machine that handles this package (Continental Can's "Jak-Et-Pak 75") operates at 450 bottles per minute and has special gripping fingers that squeeze the package [Continued on page 287]







Design confirmed

Revamped to satisfy a 10-point checklist, Bauer & Black's new packaging of elastic goods climaxes a two-year project in which outside consumer research verified an independent designer's recommendations

oday's consumers may pride themselves on their sophistication, but when it comes to buying products of a highly personal nature, most people are still sensitive. This is one reason why Bauer & Black Div., The Kendall Co., Chicago, invested two years of study, including the most thorough package research program in its history, before introducing its new line of elastic-goods packaging specifically designed for self selection.

The program is unusual in that it first employed an independent package designer, then checked his recommendations and settled certain details through a scientific analysis and consumer survey conducted by a completely unrelated organization.

The results appear to be well worth the effort. The new packages are tasteful and informative, and they display dramatically either singly or in groups. Judicious standardization of colors and package sizes has kept costs at the same level as—or in some cases less than—the former packaging. Most important, the new packages substitute admirably for that vanishing American, the retail clerk. Also, the company's new folding boxes have just won a first award in the Folding Paper Box Assn.'s annual competition (see p. 173, this issue).

To house a line of 54 products, Bauer & Black's new packaging utilizes 13 different colors plus black and white, and three different types of construction—set-up boxes of 60-lb, cast-coated paperboard, and one- and two-piece folding cartons of 13-pt, clay-coated blue-white solid bleached sulphate. Yet one basic surface design is adaptable to all the products except stockings and gives instant brand recognition to each. And even elastic hosiery, though packaged differently, shares enough recurring design elements to relate the entire line. At the same time, the range of complementary colors prevents monotony. The colors were not chosen for attractiveness alone; each was carefully researched and selected for psychological characteristics and effect.

Aside from color, the most eye-catching aspect of most of the packages is their semi-trapezoid shape. Only elastic stockings remain in conventional set-up boxes, because studies revealed that they are still the preferred container for this product.

The offbeat semi-trapezoid shape is more than just a device to attract attention, although this factor is an advantage. The angled top provides maximum legibility for product identification. Most interesting of all: It encourages display of Bauer & Black goods in the more effective upright position rather than horizontally.

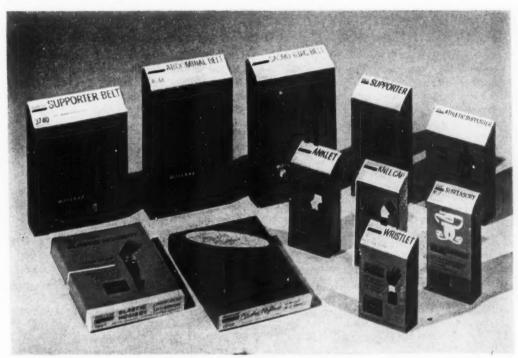
The face of the carton carries a stylized drawing of the product on a silhouette figure, plus a few lines of explanatory copy. Use information is given more fully on the back of the carton. Copy treatment is frank and complete, yet in good taste.

A similar design layout has been adapted to the set-up boxes for the two elastic-hosiery lines.

Shopper inspection and showcase display of betterquality merchandise are enhanced by new folding-trayand-sleeve carton construction. Standard merchandise is packaged in one-piece folding cartons. Repetitive pattern of Bauer & Black name on interior and exterior of side walls adds brand impact.



by research



New packages achieve family similarity for all items in Bauer & Black's line of elastic goods, including these men's and women's products in semi-trapezoid-shaped cartons and elastic stockings in set-up boxes. Complementary colors were chosen for their psychological value in selling each product to a specific type of buyer. The same principles are applied to 43 other packages in the line.

All the packages feature a new logotype. Familiar block letters have been retained for the company name, so as not to break too sharply with packaging used for the company's other health-care products. Typography plays an important part in total design. Impersonal, easy-to-read condensed Gothic type was selected for the product name to set these items apart. It identifies and relates the entire line and is carried through to create an all-over pattern on the sides of the packages. A strong horizontal rule used with this type focuses on certain words.

A special horizontal symbol of hourglass shape has been incorporated for elastic goods. The symbol's web-like structure gives an impression of elasticity and strength. Selection of these and other design elements was justified by research results.

Bauer & Black's elastic-goods packages were last redesigned in 1947. They were mostly set-up boxes with a sprinkling of folding cartons and, at that



Old packages had little similarity and suffered from almost total lack of product illustration and inadequate instructions on product use.

time, their continuity of a striped pattern and an oval brand logotype was considered quite advanced in achieving a "corporate look." Their main drawbacks for selling in the '60s were sparse copy and lack of product illustration. Customers were still dependent on the drug clerk for advice on proper style, size and other buying pointers; yet in most large drug stores today the clerk is seldom around.

Realizing this, Bauer & Black decided two years ago to repackage, even though the line has been a sales leader in its field for many years and was not in marketing trouble. But like many other astute packagers, the company believes in carefully planned packaging change before any of the usual warning signals become evident.

Bauer & Black knew the line did not lend itself to transparent packaging, the current self-service

Improved display qualities of new packaging for self-service merchandising are dramatically demonstrated by this rack containing both new and old packages. Semi-trapezoid shape encourages striking vertical display that provides both top and front identification.

favorite, and so some form of carton or set-up box was considered most suitable. The company does all of its packaging manually; therefore, there were no involvements with machinery considerations.

10-point checklist

Bauer & Black knew what the packaging had to accomplish and a 10-point checklist was drawn up in addition to the basics of good taste:

- 1. The package should answer all customer questions as to advantages, size, use, care, etc., without the need for clerk assistance.
- 2. Packaging should connote high quality, though not necessarily high price.
- 3. Packaging should lend itself to effective standup display in the retail outlet.
- If possible, packages should fit existing Bauer
 Black store-display fixtures.
- 5. Improved family resemblance and strong brand identification were musts.
- Within this package family there should be definite, if subtle, distinctions to encourage purchase of the higher-quality items.
- 7. Packaging should relate as much as possible to the sex of the buyer; this requirement could be waived for such products as elastic anklets and wristlets used by both men and women.
- 8. End panels as well as front and back should carry complete product identification.
 - 9. Packages should be soil resistant.
- 10. Finally, the packaging should be completely in tune with today's drug-store selling methods because the drug store remains the primary outlet for this type of specialized merchandise.

Design and research

While the new packaging is professional in every respect, the casual observer would not realize the painstaking care which went into every phase of the package redesign program.

The package designer was selected after extensive screening of eight applicants. Before beginning the creative aspect of his work, the designer went into the field for first-hand study of typical drug-store fixturing and selling methods, and to evaluate retailer attitudes toward the sale of elastic goods. After assimilating his information, he recommended a specific carton structure. [Continued on page 295]

SUPPLIES AND SERVICES: Package design by Morton Goldsholl Design Associates, 201 N. Wells St., Chicago 6. Research program conducted by Container Corp. of America, Design Laboratories, 38 S. Dearborn St., Chicago 3. Cartons by Weyerhaeuser's Ace Carton Div., 5800 W. 51 St., Chicago 38, and Sonoco Products Co., Hartsville, S. C. Set-up boxes by Riegel Paper's Lassiter Div., 350 Fifth Ave., New York 1.

Thin skin that's tough

New way of making bags with shrinkable polyester film gives an economical, skin-tight package that defies breakage and doubles shelf life of B. J. Price processed meats

Neither the poking fingers of consumers nor the abrasive action of sharp-edged ground spices will penetrate a tough, new skin-tight bag for processed meats made from shrinkable polyester film. While the film has been available for some time, new converting techniques now enable it to be prefabricated into contoured bags that, after shrinking, (1) conform closely to the product no matter how irregular its shape and (2) provide a strong barrier that is said to double the shelf life of these products.

A pioneer user of the new package is the B. J. Price Co., Chester, Pa. (150 employees). This firm, which produces more than 130 food items under the Chester Rose brand, is using the shrinkable bags for 14 of its most difficult-to-package products, ranging from boiled ham and pepper loaves to Polish sausages and frankfurters. Other advantages of the thin, ½-mil polyester, according to this user, are the film's high transparency, its even, tight shrink and low-temperature stability.

In the converting process, it was necessary to find two special types of adhesives: one for the bag's longitudinal seams and another for its rounded bottom seams. These adhesives are applied on a flexographic press and each is adaptable to the particular stresses that occur in different parts of the bag during the shrinking process. Also, the supplier's bagmaking machine was modified with a new forming mandrel and contoured sealing shoe.

To strengthen the bottom seal and eliminate external seams that would give an untidy appearance in a skin-tight wrap, the bag, printed on the inside when delivered, is turned inside out during the packaging operation. This is done with a single manual motion on a special loading mandrel on the



Simple procedure with new shrinkable bags starts with manual loading mandrel. After a vacuum is pulled, the bag is secured with a metal clip, then the package is dipped in a hot-water bath to tighten the film.

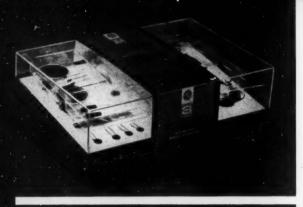
packing table. The product is then slid into place and a vacuum is pulled on the bag. The bag is then fastened with a clip which, because polyester is so thin, is much smaller than those used with conventional materials. Excess film is then trimmed away.

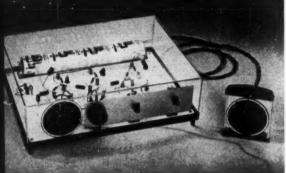
Immersion of the package in water at 205 to 210 deg. F. for 1 to 3 sec. produces uniform shrinkage that does not distort printing. The film reportedly retains a tight appearance and does not "weep" moisture either at low storage temperatures or under display conditions up to 70 deg. F. Excellent packaging efficiency and a cost comparable with that of conventional shrink films are also reported. Supplies and Services: Bags by Vac-Pac Corp., 150 W. Ostend St., Baltimore 30, Md., using Du Pont's "Mylar" polyester film.

Irregular shapes and abrasive spices pose no problems for tough polyester-film bag. After shrinking, the film follows closely every contour of product, as on head cheese (left). Even the sharp particles of ground pepper on meat loaf (right) cannot break the thin film.









GE enters the hobby market

A whole new trend in the packaging of hobby kits may be started by the line of educational electronic science kits just introduced by the General Electric Co., to be known as GE Educational Projects. Recognizing that customers can't see contents in closed boxes and that lids take up too much display space, the designers of these packages have made everything visible at a glance by using transparent polystyrene pressure-formed covers. Inside, every item is protected from loss or damage by skin or blister packaging, or some other pilferproof construction. All bases and covers are designed to become functional parts of the seven projects in the line, priced from \$10 to \$40: three experimental electronic laboratories and four projects resulting in the making of either a transistor radio, a transmitter, an intercom or an analog computer. The lower illustration shows how the package is integrated into the completed project.

The carefully planned packaging, which involves a complete new production set-up at GE and dozens of different package forms, is aimed to give a serious scientific appearance to distinguish these Educational Projects from hobby kits aimed solely for the toy market. Package-design program by Visual Marketing, Inc., 375 Park Ave., New York.

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Bright corrugated scores for Whitman miniatures

The fine multicolor design effects that can be achieved by printing on bleached-kraft corrugated linerboard are illustrated in a combination shipper-display unit used by Stephen F. Whitman & Son, Philadelphia, to introduce famous Whitman Sampler chocolates in miniature packages for self-selection. Whitman gives the new shipping container, which sets up quickly into an eye-catching counter merchandiser, much of the credit for successful launching of its new 2-oz. candy package. This application of colorful corrugated to the display packaging of a high-turnover impulse item also suggests similar opportunities for a wide range of other consumer products.

Holding 100 miniature packages, the Whitman shipper-display carton is delivered to retailers in a protective corrugated sleeve. To set up the counter unit, the dealer removes the sleeve and strips off a perforated section in the carton's front panel, exposing the candy packages to customer view. This removable section (which is printed upside down) is notched at its base for attachment to the carton's back panel, where it serves as a display riser. A prominent price mark is designed to stimulate impulse buying of the confectionery products.

Two different seasonal surface-design motifs— Christmas and Easter—are offered to dealers. Corrugated shipper-display carton and sleeve by Inland Container Corp., 700 W. Morris St., Indianapolis 6.



Plastic-coated juice carton

The polyethylene-coated milk carton, already actively competing with the traditional waxed container for dairy acceptance, is invading another product field—packaged fresh orange juice. With this container, the Minute Maid Co., Orlando, leading packager of frozen citrus concentrates, is also invading the fresh-juice market with its new "Dairy Pure" chilled orange juice as a companion product to a broad line of frozen concentrates and fruit drinks.

Copy on the new carton emphasizes two principal claims for this type of polyethylene-coated container—(1) it is leakproof, and (2) it eliminates a tendency of wax coatings to flake into the product. A foil-tabbed corner device is designed for easy-open, non-drip pouring and reclosing.

The company, recently merged with the Coca-Cola Co., carries over to its new carton the principal design elements of new labels recently applied to its canned products—a stylized double-M crown and an undulating color band. The design is repeated on all four sides of the container.

To reduce bubbling and foaming, the quart cartons are filled at four successive filling stations, each of which dispenses one-half pint of orange juice, to make one full quart. Carton by Sealright Co., Inc., Fulton, N.Y.





Adjustable-flow roll-on

Northam Warren introduces Odo-Ro-No liquid deodorant in a roll-on applicator bottle that can be adjusted with a twist of the wrist to regulate product flow. It is a refinement that suggests broad new uses for this convenience package.

Secret of the Odo-Ro-No roll-on's adjustability is a polyethylene collar on the threaded neck of the glass bottle. The circular collar is positioned so that its upper rim is in circumferential contact with the polystyrene applicator marble. When the collar is turned to the right, it descends away from the marble, permitting more liquid to be picked up and carried out of the bottle. Turning in the opposite direction brings the collar up and into close contact with the marble, thereby restricting product flow.

Another feature of the new "Adjusta-Roll" bottle, says the packager, is that the applicator marble is 45% larger than normal, for speedier and more complete skin coverage. Designed for easy hand hold, the clear-glass container also enables the user to keep visual tabs on her supply of deodorant. Label data and instructions on use of the adjustable collar are fired on the container's surface. Bottle, polyethylene closure, polystyrene marble and collar fitment by Owens-Illinois, Toledo 1.



Stand-or-hang blister pack

A carded blister pack that can be stood up on a counter or hung from a pegboard rack affords point-of-purchase display versatility to Helene Curtis' Endac, an acne medication in a cylindrical metal applicator tube. Package stand-up is provided by the unusual flat-bottom, broad-base construction of the transparent acetate blister, whose upper portion is contoured to the shape of the product container. In package set-up, the bottom of the rigid blister is aligned with the bottom of the card so that the unit can be stood up easily without toppling or leaning. A die-cut hole near the top of the card permits conventional rack display.

The card itself is of fold-over construction, with a diecut opening on the printed face that conforms to the shape of the blister. Flanges on the blister hold it securely in place between the glued halves of the card.

Printed in multicolor for added self-selection appeal, the card features a prominent price mark designed to encourage impulse purchasing. Advantages of the product are listed in bold lettering adjacent the protective blister. Acetate blister by Plastofilm, Inc., Wheaton, Ill. Printed paperboard card by Federal Paper Board Co., Bogota, N.J.

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The disappearing pictorial

The ancient Chinese proverb holds that "one picture is worth a thousand words," and most food packagers have been inclined to go along with this philosophy by giving label emphasis to appetite-appealing product vignettes. But there now appears to be a definite trend toward strong bill-board labeling that eliminates pictorials to give greater prominence to brand and product identification and to "special-feature" copy.

Illustrative of this trend is the new paper-label design developed by H. J. Heinz Co. for canned chicken stew with dumplings and other ready-to-serve entrees. The former label featured a full color vignette of the product in a casserole, subordinating the heat-and-eat convenience appeal suggested by the words "Minute Meal," which appeared in small type at the bottom of the label. In the redesigned red-green-and-gold can label, the pictorial has been abandoned in favor of a poster-style panel that carries the product name in bold lettering. To call attention to the convenience factor, the "Minute Meal" slögan now is printed in large block type, with the words separated by a clock symbol designed to strengthen the suggestion that the product can be prepared in a jiffy. Paper label by The Nevins Co., Clifton, N.J.



NEW



OLD

Better dominance for Domino cartons

An upgrading program for Domino sugar packages reveals a number of subtle design improvements. For the first time in the history of the brand, the printing of the name, Domino, has been changed from its familiar blue on yellow background to colors coded to the different types of sugars. And the famous trade name appears in each case against a bright new white area, produced by printing white on the unbleached stock.

All full-color illustrations are reproduced from a new series of color photographs that heighten appetite appeal with a more intimate, friendlier technique. For instance, the package for dark brown sugar depicts a child's hand reaching for cookies, calculated to associate sugar for cookie recipes more closely with children who eat the most of them. The new format also gets away from the straight horizontal-line stiffness of the old by a diagonal treatment of front-panel copy. Illustrations covering the full width of the front panel and extending around the side add to the dramatic effect. Back panels have also been redesigned for

more emphasis, greater legibility of recipe copy and with color illustrations suggesting sugar uses. The redesign program is part of a graphic overhauling of all Domino packages. Design program by Robert G. Neubauer, Inc., Fairfield, Conn.

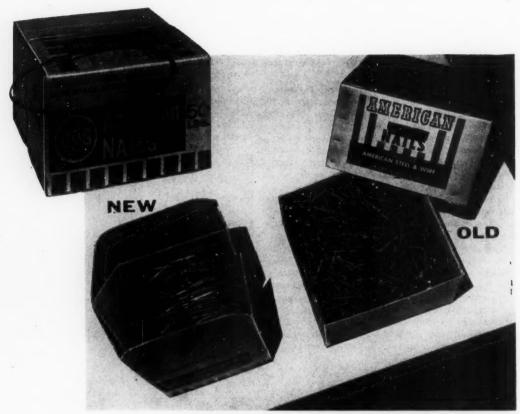


Oral-spray bottle with built-in direction control

An upward-angled spray head gives directional-control convenience to Vick Chemical's new squeeze-to-use polyethylene bottle for Lavoris antibacterial oral breath freshener. When the plastic container is held up to the mouth and squeezed, says Vick, the liquid product is forced through the dispensing orifice at an angle that carries the spray over the user's tongue and into the throat, for more effective penetration. As an additional convenience feature, a red arrow hot stamped on top of the spray head points directly to the pinhole dispensing opening, to minimize the possibility of "wrong-way" spraying of the product.

Designed by Vick packaging engineers, the spray head (which also incorporates a dip tube) is made of polyethylene. The plug-type fitment seats securely inside the threaded neck of the squeeze container, which is topped with a decorative red screw cap. Holding 17 cc. of product in concentrated liquid form, the break-resistant polyethylene squeeze bottle is designed to be carried in pocket or purse. Brilliant red heat-transfer labeling—reverse printed on the front of the white bottle—is calculated to afford stand-out consumer appeal in self-selection display. Polyethylene squeeze bottle by Plax Corp., P. O. Box 1019, Hartford.





Space-saving side-by-side and end-to-end alignment of nails in new 50-lb. shipper reduces board and cubage compared with former 50-lb. carton. New boxes use 50% less board, occupy 10% less cubic space than old boxes. Scored gusset at left side of new box folds outward to form pouring spout. Copy on new carton (circled) tells customer about parallel packing.

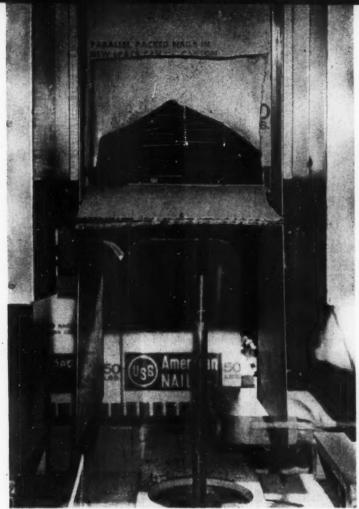
ALIGNED by magnetism

An entirely new principle
of arranging and loading
bulk quantities of metal objects,
built around a special corrugated box,
marks a big advance
in nail packaging and holds promise
for many similar products

ext time they open a 50-lb. box of nails, carpenters may be pleased to find that in place of the usual hopeless jumble, the nails are neatly aligned like sardines in a can. Any thought that this is just another example of convenience packaging is a mistake, however, for behind it, in reality, is a fight by an old-line American industry to offset the serious competition of cheaper foreign-made nails.

Coupled in this program are (1) a unique use of electromagnetism to align and load the nails in less space and permit a box of smaller cube and (2) a new-style one-piece corrugated box, believed to be the first multiwall box ever set up automatically. The box has a triple-ply bottom, two-ply walls and a gusseted, two-ply interlocking top. The top flaps stand erect during filling to help funnel the nails into place. Later, when the user opens the top flaps and pushes out one of the gussets, a pouring spout is created for easy dispensing of nails.

Together, the new cartons that save board and the related revisions in packaging techniques reduce both time and space in the factory and cut



Multiwall box (cut away to show alignment of nails) is elevated so nails drop in this pattern when current is cut off from powerful magnets on either side. Box is then lowered and pushed onto a take-away conveyor by next empty carton.

costs to the extent, most observers believe, that American nails can again compete with imports.

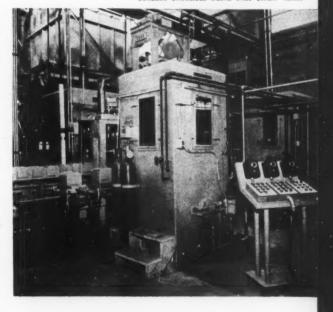
This complete new magnetic loading and packaging system is now going into nail mills all over the country at a cost estimated by suppliers at \$125,000 apiece. Beyond that, it has obvious possibilities for any ferrous-metal product which can benefit in a similar manner from lengthwise alignment in cartons as against jumble packaging.

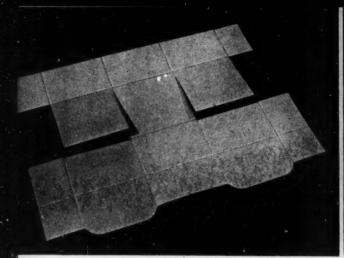
U. S. Steel's experience

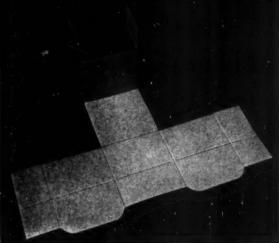
One of the first and most significant installations is at U. S. Steel's huge American Steel & Wire Div., Joliet, Ill.—biggest producer in the nail industry.

Although complex and under development for several years, the new system is based on a simple principle. Nails flow out of a vibrating feeder and down between two strong electromagnets, which align them and hold them suspended end to end and side by side in horizontal position until the desired quantity is reached. Then the magnetic current is momentarily cut at this point and the full

Over-all view shows box conveyors (left) feeding and returning. Boothlike units behind master control panel contain chemical baths that clean nails.







Seven steps that convert 18-section die-cut and scored corrugated blank into glued multiwall box. Ingenious design allows box to be set up automatically, also provides 15 to 20% more compressive strength. Finished shipper has two plies of corrugated at sides and top, three at bottom.

complement of nails, still in neat alignment, drops as one load into a box which is waiting below.

The system has these noteworthy advantages:

1. The new box requires 50% less board than a former two-piece telescoping box for the same quantity of nails and occupies up to 10% less cubic space. Since nails are laid in even rows, there is no needless air void in the pack and the new box may be filled to the top—unlike the jumble pack, which requires allowance for head room.

2. A sensitive scale on the magnetic machine automatically assures accurate fill of containers—to plus or minus only one nail.

3. The magnetic machine needs no change-over to handle different depths of boxes (all cartons are 9.5 in. square). And the machine is extremely flexible, accommodating nails of from 3/4 to 8 in. in length and from 20- to 5-gauge diameter.

The new system requires only about onequarter the total floor space of the previous method.

5. Though it holds the same 50-lb. contents as the former box, the new, smaller one permits easier handling by both AS&W and its customers. Palletizing and storage are facilitated.

Just how much packaging progress is represented by the new system in the nail industry becomes evident when you consider that the usual industry practice, now being replaced by magnetic packaging, involved dumping nails onto packing tables and raking them manually into telescoping boxes or kegs, after which the packages were weighed, nails added or subtracted by hand to make proper count and, finally, steel strapping the boxes.

Pressure for better packaging mounted when about a year ago customer demand switched from 100-lb. boxes to 50-lb. boxes. Since the smaller-size telescoping boxes cost nearly as much as the 100-lb, ones, packaging materials cost rose almost 80%.

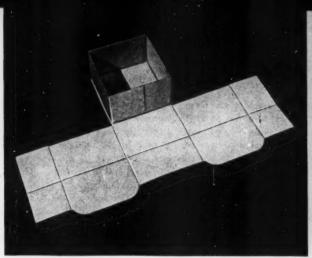
Essential to this packaging system is the interesting new one-piece box that is made of 275-lb.-test corrugated, yet is formed up like a folding carton. AS&W uses three sizes of 50-lb. boxes, all identical in length and width. Box height, which may be 6, 8 or 10 in., depends on the size and type of nail.

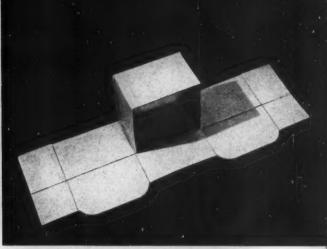
In the flat, each box has 18 panels—separated by scoring or die cutting—which are simply and easily transformed into a rigidly glued container with double and triple plies of corrugated and easy-opening and dispensing features. For reclosure, slight pressure applied by hand to the top flaps causes the flaps and gussets to snap back to their original taut position for virtually dustproof storage. The design is a prime example of imaginative new principles being applied to corrugated.

An ingenious machine for setting up the box has been developed by the box supplier and a prototype has been tested. AS&W is now awaiting delivery of an advance model. In such installations, the 25-ft.long box former will be located at the end of an L-shaped conveyor leading to the magnetic loading machine. With an output of 12 to 15 boxes per minute, the box-forming machine requires the attention of only one operator, to replenish the supply of blanks, and a cold, quick-setting adhesive.

Box blanks stacked in front of the packaging machine feed into the gluing section. Here adhesive is applied to the carton blanks either by a grooved rubber roller or by spraying.

From the gluing section, the blank emerges to meet a revolving mandrel with two forming breads. The mandrel rotates 180 deg. in a vertical plane with each cycle. As the mandrel turns, the blank is partially formed by one end of the mandrel and plowed as the box is pulled between semi-circular slides. As the box moves up at the other end of the curved slide, the forming operation is completed on





PROTOS COURTESY MEAD COMP.

the mandrel. The other end of the mandrel then begins forming of the next blank. Both of the mandrel forming ends are exactly the same.

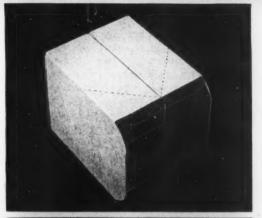
The last two flaps are plowed closed and the box is compressed for two seconds. Then it moves for 24 sec. through a 16-ft. holding section which applies no pressure, but does hold the box firmly squared up while the adhesive sets. The finished box emerges with flaps trailing and travels by conveyor to the magnetic packaging machine, ready for filling and for the final packaging steps.

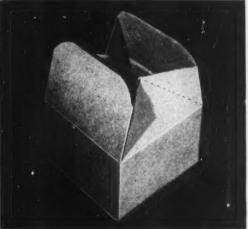
New equipment

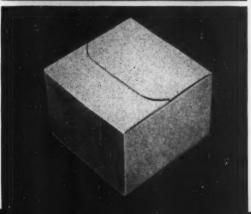
When the production change-over at AS&W is completed shortly, all that will remain of the former method is a huge pit set into the plant floor, to which the nails are brought by cart from the cutting mill on their way through several improved finishing steps before the actual packaging operation starts with a weigh bucket.

A magnetic conveyor first moves the nails up from the pit into a vibrator. Then they pass through a revolving "dewhiskering" drum and down a chute to a chemical bath for degreasing. Next, another conveyor carries them into a coating tunnel, or it bypasses this stage if the nails are not to be treated by coating. Another vibrator-and-conveyor combination leads to the weigh bucket.

This is equipped with an unusually sensitive counterbalanced scale which holds the set weight within one or two nails. It is adjustable from 25 to 100 lbs., although AS&W packages 50-lb. boxes only. The nails flow into the weigh bucket rapidly until they accumulate within ½ lb. of the set limit. Then the counterbalanced scale switches to a trickle flow. As proper weight is reached, another switch is tripped by the scale, causing the bucket to open and dump its contents into a skip hoist. There,







nails are raised 14 ft. above the weigh bucket, then discharged onto a horizontal vibratory feeder leading to the magnetized vertical hopper.

After nails have been processed to final product and box-size quantities determined by weight, the nails drop between the magnets, whose powerful current (12,000 gauss) has been turned on. The magnetic field lines up the nails end to end. They are confined to a box-sized area by the stationary distance between the faces of the magnets.

Meanwhile, a box is automatically positioned under the magnetized nails. The upturned box flaps form a continuous funnel for filling. At this point the magnets are turned off and the nails plummet as one unit into the box. The filled and lowered box is pushed aside by the next incoming empty box and is imprinted. Interlocking flaps are plowed closed and the box is secured with bands of wire.

The new box is strong—15 to 20% higher in compressive strength than the former box. After wire strapping is applied, finished boxes are automatically palletized and stored for shipment.

A simple hand-crank adjustment is the only oper-

ation required to close boxes of varying heights.

Speed of the packaging operation, varying with size of nails being packed, averages three to four 50-lb. boxes per minute for each of the lines, or about 10,000 lbs. of nails per hour.

The machine supplier has developed a model using the same magnetic principle for boxes of 1-and 5-lb. sizes, suitable for consumer use, which operates at speeds of up to 20 boxes per minute.

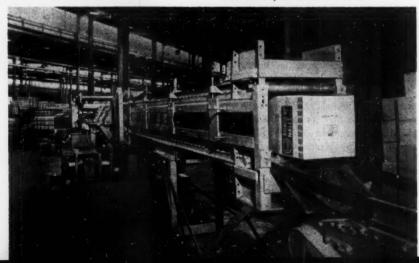
Other than taking pains to produce high-quality nails that are strong, sharp and clean, there is very little any nail manufacturer can do to achieve product distinction. Packaging distinction, therefore, becomes all the more important. Realizing this, AS&W displays the phrase, "Parallel packed nails in new space-saving carton," prominently on the box itself and in its advertising.

SUPPLIES AND SERVICES: Magnetic loading machine by Dake Corp., Grand Haven, Mich. Special corrugated container developed and supplied by Mead Containers, Div. Mead Corp., 4927 Beech St., Cincinnati 12. Carton forming and closing machines also by Dake, under license by Mead.



Box former to be installed soon at AS&W starts with gluing section (left) from which blank emerges to meet twinhead revolving mandrel (arrow) that shapes it during vertical rotation.

Holding section moves box 16 ft. while adhesive sets. Finished box is shown emerging with flaps trailing. Entire box former is 25 ft. long, requires only one operator, to replenish supply of blanks and adhesive. This photo shows pilot run of prototype unit tested at AS&W plant, which is now avaiting the installation of an advanced model.



Folding-box winners for '61

Diversity in graphic and construction techniques is evident among 100 entries cited in the Folding Paper Box Assn.'s annual competition, indicating a spirit of change among designers and packagers

inners of the 1961 Folding Carton Competition sponsored by the Folding Paper Box Assn. of America and announced late last month at FPBAA's annual meeting in Chicago clearly indicate two healthy conditions: (1) folding-carton quality generally continues to rise and (2) no one graphic or construction technique is dominating the field. There are trends, to be sure. But the judges' decisions were divided about equally between traditional and "gimmick" construction, between emotional appeal and straightforward product presentation, between luxury and economy.

The most beautiful of 37 winners in the competition, judges agreed, was a full-color photographic treatment for Ekco Products' Flint household utensils. Judges stated their regret that contest rules forbade a "best-of-show" award and that they had to be content with giving it an unequivocal first award for hardware merchandising.

For the first time in several years no single entry won more than one first award, although Mead, Johnson did very well with three separate top awards. Jantzen had two. Several first-prize winners were also among the 63 merit-award winners.

The judges had no trouble selecting a winner in each printing category—except for color-process letterpress, which they felt produced no standout.

A see-saw trend is again obvious. Last year the bulk of winners in all categories boasted some unusual construction feature. This year at least half the winners are of traditional construction. Among the uniquely constructed cartons, however, handles are very evident and flip-top boxes are also well represented. There are many display-type packages—almost twice as many as in 1960. Hexagonal shapes are popular. No packaging material is dominant. And window cartons, so important in 1960, are represented this year by only one winner,

Judges' tavorite. "A work of art," the jury said of this Ekco Products entry, although competition rules do not provide for "best of show." Judges agreed, however, that this was the most beautiful of 37 top-award winners and gave it first place in the hardware-merchandising classification. Carton, F. M. Howell Co., using 0.026 machine clay-coated kraft-back paperboard.





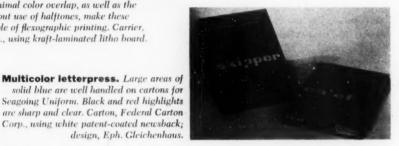
FIRSTS for SUPERIORITY of PRINTING



Flexography. Minimal color overlap, as well as the illusion of tone without use of halftones, make these carriers a fine example of flexographic printing. Carrier, Andre Paper Box Co., using kraft-laminated litho board.



Gravure. Fine-color printing for Procter & Gamble Duz with large solid areas and halftones is outstanding. Carton, Chicago Carton Co... using blue-white newsback.





One-color letterpress. Good solid areas, clean reverses and absence of scratches or ink "squeeze over" make this red and white Jantzen carton a fine example of one-color letterpress printing. Carton, Atlantic Carton Corp., using solid bleached sulphate.

Offset lithography. Hudson carton boasts faithful reproduction of color-photo details without any of the printing defects common to lithography. Carton, Berles Carton Co., using 0.021 white machine clay-coated newsback





Two-color letterpress. Blues and red, plus metallic inks, are uniformly printed and sharply registered on these cartons for Riegel pillowcases, according to judges. Carton, Weyerhaeuser Southern Corp., using 0.020 Lithwite solid newsback.

but there is much die cutting to show product and more combinations of plastic and paperboard.

From the graphics viewpoint, abstract artstrong last year-has given way to sentiment and unabashed prettiness. Whimsey is still a strong trend. But people and "partial people" are the big package-design element this year. In 1960 only three winning entries showed people; this year 12 did. Babies and pretty girls are much in evidence, but men are also used. Apparel packagers especially are turning more to large illustrations showing only portions of a figure, usually wearing the garment.

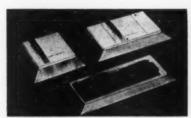
As usual, the judges were outspoken in their criticism as well as approval. Cosmetic packaging, roundly berated last year, still does not satisfy them, although the 1961 entries were credited with improvement, as were bakery goods. Toys and retail boxes were generally deplored by the judges. They considered almost all these packages unimaginatively designed and cheaply executed.

Awards of merit

In addition to the 37 first awards (all of which are illustrated on these pages) the judges voted 63



Hardware. Judges liked color coding of Sylvania light-bulb carton, permitting quick identity of size and wattage, and their ease of stacking, compactness and spur to multiple sales. Carton, Robertson Paper Box Co., using light news-lined newsback; design, Lippincott & Margulies.



Cosmetics and personal accessories. Beautifully styled carton with bevelededge base and reversible cover, half of it acetate, was judged an effective inroad to traditional set-up boxes. Carton, Federal Paper Board Co., using 0.016-foil newsback for base, 0.016 ultra-gloss manila back for the cover.



Toys. Versatility of this Comet carton enables it to be used for a number of different-sized airplane models. Carton, St. Regis' Crowell Carton Div., using 0.026 white patent-coated kraft.

awards of merit in the following classifications:

TECHNICAL SUPERIORITY OF PRINTING. Best Letterpress, One Color: Kennington shirts for Kennington, Ltd., box by Los Angeles Paper Box & Board Mills, design by Specialty Packaging Co.

Best Letterpress, Two Color: Pak-Lite Shoe Trees for O. A. Miller Co., box by Robertson Paper Box Co. Recording charts for Technical Charts, Inc., box by Cooper Paper Box Div., Clarkson Press, design by Robert Zeidman Associates.

Best Letterpress, Multicolor: Cologne for Prince Matchabelli, box by The Warner Bros. Co. Jewel



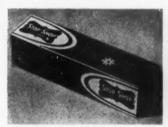
FIRSTS for POTENTIAL NEW-VOLUME USE



Sporting goods. Plastic cylinder encased in folding carton provides appeal for Boehm-Sheldon fish hooks, protect customers' fingers. Carton, Intercity Box & Paper Co., using 0.026 clay-coated board with white patent-coated back; design, Goodwill-Allen.



Medicinal products. Lauded for spacesaving attributes, these Chux cartons also have a handle and built-in dispenser feature. Carton, Robertson Paper Box Co., using white patent-coated newsback.



Food. Designed for vendingmachine sales, this ¼-lb. carton for Stop & Shop margarine was considered the forerunner of many more to come. Carton, Richardson Taylor-Globe, using 0.012 Marathon Ultratone board.



Paper products. Good taste and restraint of Hallmark folder-like cartons were considered by judges as adaptable to many other packaging purposes. Carton, Weyerhaeuser Co., using Texcard. (Also a merit-award winner, General Merchandising Superiority, Paper Products.)

Textiles and apparel. Line of flip-top cartons for A. Stein's undergarments was thought to have excellent potential bigvolume use. Carton, Weyerhaeuser Co., using machine clay-coated board with patent-coated back; design, Charles Akers.



Miscellaneous. Ferry-Morse has reduced inventory from 22 cartons to one, with use of die-cut sleeve that lets seed-packet printing show through. Carton, Bruce Carton Co., using coated solid bleached sulphate; design, Stephens-Biondi-DeCicco. (Also merit-award winner, General Merchandising Superiority, Miscellaneous.)



Blend coffee container for Jewel Tea Co., box by Weyerhaeuser Co., Boxboard & Folding Carton Div. No. 1 Chatham baby blanket for Chatham Mfg. Co., box by Weyerhaeuser Southern Corp.

'Best Flexographic Printing: Apparel boxes for Waltah Clarkes' Hawaiian Shop, box by Andre Paper Box Co.

Best Gravure Printing: Whiskey for Fleischmann Distilling Co., box by Container Corp. of America, design by Robert G. Neubauer, Inc.

Best Lithographic Printing: Cookies for Arnold Bakers, Inc., box by The Lord Baltimore Press, design by Fred Truchsess. Frozen bread for Morton Frozen Foods Div., Continental Baking Co., box by The Lord Baltimore Press. Hostess brand eggs for P & C Food Markets, box by Continental Can Co., Robert Gair Div. Pillsbury bread mix for Pillsbury Co., box by U. S. Printing & Lithograph Div., Diamond National Corp. Sanitary belt for Personal Products Corp., box by F. N. Burt Co. Vigoro plant food for Swift & Co., box by Continental Can Co., Robert Gair Div.

SUPERIORITY OF CONSTRUCTION. Alcoa wrappers for Aluminum Co. of America, box by Container Corp. of America. Antonio y Cleopatra five-packs for American Tobacco Co., box by Federal Paper Board Co. Ballpoint Custom and Debutante Pens for Parker Pen Co., box by Container Corp. of America. Dolly Madison Saf-T-Seal ½-gal. ice cream for Foremost Dairies, box by Edwin J. Schoettle Co. Hostess cheese spread for Borden Co., box by Flashfold Box Corp., design by Lincoln Engravers, Tetrex-Apc for Bristol Laboratories, box by F. M. Howell & Co.

BEST POTENTIAL NEW-VOLUME USE. Medicinal Products: Tetrex-Apc for Bristol Laboratories, box

by F. M. Howell & Co. Food: Bal Cal for Sears, Roebuck & Co., box by U. S. Printing & Lithograph Div., Diamond National Corp. Twinkles for General Mills, box by Waldorf Paper Products Co., design by Kempitour Co. Sporting Goods: Golf balls for Worthington Ball Co., box by St. Regis Paper Co., Great Lakes Box Div., design by Thomas H. Davis. Toys: A.B.C. blocks for Kusan, Inc., box by Standard Packaging Corp., Bradley-Gilbert Div.

MERCHANDISING SUPERIORITY. Medicinal Prod-Aureomycin suspension for American Cyanamid Co., Agricultural Div., display carton by Brown & Bailey Co., individual boxes by Wilkata Folding Box Co., design by Raymond Loewy. Cosmetics and Personal Accessories: Brite 'n Groom conditioner hairdressing for Rexall Drug Co., box by Robertson Paper Box Co., design by Design Associates. "Come Alive Gray" for Clairol, box by The Warner Bros. Co., design by Eric de Kolb. Desert Flower Beauty Bath for Shulton, box by U. S. Printing & Lithograph Div., Diamond National Corp. Swedish bath oil for Sybil-Ives, box by Sample-Durick Co. Soap: Comet for Procter & Gamble Co., box by Mead Packaging, Div. The Mead Corp. Twinkle copper cleaner for Drackett Co., box by Indianapolis Paper Container Corp. Food: Hostess brand eggs for P & C Food Markets. box by Continental Can Co., Robert Gair Div. Pancake mix for International House of Pancakes, box by Consolidated Paper Box Co., design by Howard Blonder & Associates and Al Kalis Studio. Sturdy Dinner for Sturdy Dog Foods, box by Container Corp. of America. Waldorf pitted dates for California Date Growers Assn., box by Southern California Carton Co., design by Owen Crain. Bakery Goods: Pretzels for Hygrade Bakery, box by The Lord

FIRST for SUPERIORITY OF CONSTRUCTION

Ingenious design of Topco's packaging, according to judges, provides both protection and merchandising appeal at low cost. Valiant vitamins, skin packaged on cards, nest for shipment, then slip into slotted trays for effective display. Tray and carton, Weyerhaeuser Co., using white patent-coated newsback; design, Benolken, Douglas, Minnick.







Textiles and apparel. Judges applauded Bauer & Black's excellent design treatment for difficult product line; also liked semi-trapezoid carton construction. Carton, Weyerhaeuser Co., using clay-coated solid bleached sulphate; design, Morton Goldsholl Design Associates (see "Design Confirmed by Research," p. 160, this issue).



Textiles and apparel. All elements of these handsome Jantzen packages connote active motion, including fliptop construction for quick examination of contents. Carton, Container Corp., using 0.018 solid bleached sulphate.



Medicinal products.
Hexagonal sleeve, appealing graphics of Mead Johnson gift package glamorize the product and project favorable corporate image. Carton, Continental Can's Gair Div., using 0.014 solid bleached sulphate.



Soap. Tidy House watersoftener carton projects spring-like freshness suitable to product, in effective contrast to most cleanser packaging. Carton, Container Corp., using 0.028 super white patentcoated newsback.



Bakery goods. Mouthwatering graphics, built-in handle distinguish Arnold Bakers' carton. Carton, Lord Baltimore Press, using experimental stock by International Paper; design, Fred Truchsess. (See MP, Fcb., 1961, p. 101.)



Cosmetics, personal accessories. Buy appeal and full product selection are combined in small space with this easel-backed counter display for Lanolin Plus Complexion Control Liquid Make-Up. Display, Weyerhaeuser Co., using white patent-coated bleached sulphate with kraft back.

Beverages. Four-color cartons for Manischewitz wine are very handsome; banding at bottom encourages multiple sales without detracting from design, is adaptable to two or three bottles. Carton and band, Container Corp. of America, using Concorates 78.



Sporting goods. Foil-covered display and concave cartons are imaginatively constructed at no sacrifice of strength. Carton and display, Diamond National's Gardner Div., using white solid newsback for cartons, vinyltreated foil laminated to kraftlined solid newsback for display.

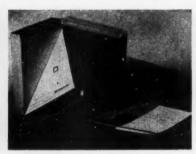


Food. A self-contained story book on back of each carton won judges' plaudits. Brand identification, artwork and effective use of all carton surfaces for General Mills' Twinkles were also considered topnotch. Carton, Waldorf Paper Products Co., using 0.016 white patent-coated newsback with back panel of 0.008 solid sulphate. (Carton also won a merit award for Potential New-Volume Use, Food.)





Medicinal products. Its excellent construction gives long shelf life to Holland-Rantos counter unit. Display, Lord Baltimore Press, using experimental stock by International Paper; design, Dixon & Parcels Associates.



Paper products. Interesting new carton construction is this customer-catcher for Mead Johnson's dispenser display, but the cute baby illustration helps, too, according to the judges. Display, Creative Packaging, Inc., using white Kromekote with solid white bleached sulphate lining.



Tobacco. Cheery artwork, quality construction and printing garner a first award for frequent winner in folding-box competitions, Consolidated Cigar. Cartons, Weyerhaeuser Co., using 0.020 No. 1 Glosstex with patent-coated base; design, Paul Rand.



Confections. Judges thought five-color lithographed carton for Rolo candies looked good enough to eat. Carton, Continental Can's Gair Div., using 0.018 Gaircote newsback; design, Lippincott & Margulies.



Cosmetics, personal accessories. Unusual colors and whimsical copy make these Tussy cartons "offbeat," yet merchandising requisites are not neglected. Note good brand identity. Carton, Container Corp., using manila-back Concoratex.



Garriers. An intriguing lock-in feature, plus striking graphics gave the carrier award to Metrecal over dozens of beer and soft-drink entries. Carrier, Creative Packaging, Inc., using paper-backed silver-colored foil lined with 0.020 kraft.

Baltimore Press. Thin-Jer Mint Wafers for Burry Biscuit Corp., box by The Lord Baltimore Press, design by Lippincott & Margulies. Confections: Peanut-brittle mix for Lusk Candy Co., box by The Lord Baltimore Press. Frozen Food: Taste O'Sea Fish Dinner for O'Donnell-Usen Fisheries Corp., box by The Lord Baltimore Press. Tobacco: Jaguar 70, Palma Candela, Pamatela Grande, Cedaroma for Gradiaz Annis Y Ca of Tampa, Florida, box by Continental Co., Robert Gair Div. Kool regular-size cigarettes for Brown & Williamson Tobacco Corp., box by Marathon Div., American Can Co., design by Frank Gianninoto & Associates. Hardware: Bearings for Delco Moraine Div., GMC, box by Paper Package Co. Deluxe steak-knife set for

Stanley Home Products Co., box by Sample-Durick Co. Saw blade for H. K. Porter Co., Disston Div., box by Diamond National Corp., Gardner Div. Various hardware items for Ajax Hardware Co., box by Los Angeles Paper Box & Board Mills, design by Norman Gallon. Textiles and Apparel: "Free-For-All" for The Warner Bros. Co., box by The Warner Bros. Co., Girl's bouffant petticoat for Maytown Mfg. Co., box by Edwin J. Schoettle Co., design by Rex Reichert Associates. Pata-Cake for American Throwing Co., Inc., box by Mead Packaging, Div. The Mead Corp. Raincoats for Almar Mfg. Co., box by Miller & Miller, Inc., Sub. Union Bag-Camp Paper Corp. Skipper and Chief dresswhite summer uniforms and Seafarer white hats for



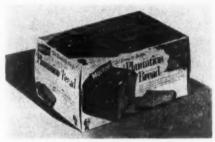
Frozen foods. In a packaging category surfeited with beauty, judges deemed Salada-Shirriff-Horsey's frozen seafoods equally attractive, yet different enough to warrant a first award. Carton, Milprint, Inc., using triple-coated solid bleached sulphate with wax-sized back.



Toys. Engaging graphic design took the honors here for My Merry Magic cartons and display unit. Stylized hand and top hat tie in with slogan, "It's easy to be a magician." Carton and display, Diamond National's U. S. Printing Div., using 0.021 clay-coated newsback; design, Robert Zeidman Associates.



Retail boxes. Unusual shape and sturdy handle of Carson Piric Scott "Inner Circle" box qualified it for a first award. Box, Federal Paper Board Co., using double-luminated newsback.



Frozen foods. Judges were impressed with Continental Baking's imaginative use of a folding carton for frozen bread, also with the excellent quality of the offset lithography. Carton, Lord Baltimore Press, using solid bleached sulphate with "Par-a-Glaze" finish. (Carton also won a merit award for Technical Superiority of Printing, Offset Lithography.)



Miscellaneous. Judges liked the green-and-white color scheme and the hexagonal shape of this carton for the Oasis flower holder. Carton's distinctive closure was also cited. Carton, Packaging Corp. of America, using coated solid bleached sulphate; design, Smith, Scherr & McDermott.

Seagoing Uniform Corp., box by Federal Carton Corp., design by Eph. Gleichenhaus. Beverages: Boilieux brandy for James B. Beam Distilling Co., box by Continental Gan Co., Robert Gair Div. Chokalu creme de chocolate liqueur for Jules Berman & Associates, box by Consolidated Paper Box Co., design by Sheldon Marks Associates, I. W. Harper for Schenley Industries, box by U. S. Printing & Lithograph Div., Diamond National Corp. Smirnoff Vodka for Heublein, box by Continental Can Co., Robert Gair Div., design by Charles Magers. Carriers: F & P tomato sauce for Felice & Perelli Canning Co., box by Andre Paper Box Co. Toys: Chemical Wonder science set for Stuart Toy Mfg. Co., box by Central Carton Co., design by

Robert Zeidman Associates, Great Guns for Mattel, Inc., Toymakers, box by Standard Paper Box Corp. Paper Products: Gift ties for William E. Wright & Sons, box by Sample-Durick Co., design by James Doherty Associates, Personalized Christmas cards for Hallmark Cards, box by Weyerhaeuser Co., Boxboard & Folding Carton Div. Recording charts for Technical Charts, Inc., box by Cooper Paper Box Div., Clarkson Press, Inc., design by Robert Zeidman Associates, Miscellaneous: Bloom-Rite Bonsai plant for Nurserymen's Exchange, box by Andre Paper Box Co., design by Walter Landor & Associates, Gro-Kit seed planter for Ferry-Morse Seed Co., box by Bruce Carton Co., design by Stephens-Biondi-DeCicco, Inc.

WHITE CAP CO. NEW YORK

Seal and Reseal





"Why White Cap?"

Three thousand packages on parade tell the story

Each year, the food trade comes to the White Cap exhibit at the National Canners' Convention to take advantage of a rare opportunity to see what's happening in glass packaging.

Here, thousands of packages, row on row, offer the visitor a unique reference "library" on the latest developments in foods-in-glass.

But these thousands of packages offer something more, too. Together, they provide comprehensive evidence of the scope of White Cap's role in the food field—and the closeness of the tie between White Cap and packer.

Looking at this timely exhibit, the visitor can

see, too, the unique range of the White Cap line—the closure line that embraces every type, size, and shape of glass package and every kind of processing situation. At the same time, he can observe the trends and developments in convenience that are making foods-in-glass more popular than ever.

All in all, the packages on parade in this exhibit provide a great deal of light on the question: "Why White Cap?" So, to all the packers who have made this notable exhibit possible, White Cap again says "Thank you!"

WHITE CAP COMPANY

DIVISION OF CONTINENTAL @ CAN COMPANY

Turning to protective wraps for products
usually sold without packaging,
a lumber mill and a producer of sheet steel
cut damage claims, add merchandising appeal

Upgrading the

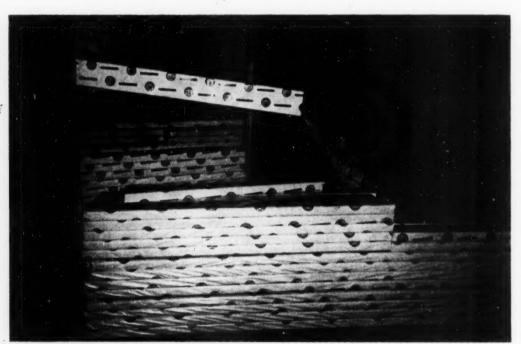
Two construction products usually marketed in non-packaged form are now going to customers in sales-minded packaging that combines long-term protection and merchandising appeal. Both are quality items: fine lumber and top-grade sheet steel.

The adoption of packages for these traditionally hard-to-handle products testifies to the economy, versatility and high-performance characteristics being built into modern packaging materials. And news of these applications follows on the heels of a significant development in mechanized packaging for still another problem product—building bricks. Taken in sum, the indications are clear that imaginative engineering of materials and methods is fast whittling the list of "unpackageable" products, for both industrial and consumer use.

* See "Brick Packaging Mechanized," Months Packaging, Oct., 1960,

Although the need to protect high-finish lumber and steel against weather damage and shipment impact is obvious, it has generally been provided only by careful handling in sheds and warehouses and in trucks, rail cars and ships. But now a Western producer of lumber for the building and do-it-yourself trades is adding merchandising glamour with a colorfully printed, polyethylene-coated kraftpaper wrap that supplies instant brand identification and effective product protection. And a Midwestern steel shipper is exporting high-finish, automotive-grade sheet steel in a multi-ply wrapper designed to help the mill hold its market against European competitors by assuring safe delivery and eliminating a difficult adjustment problem.

In each instance, the swing to packaging has more than matched company expectations. The stories of these developments are worth careful attention not



Savings in time and labor needed for loading and unloading lumber, in comparison with former need to handle individual boards, are advantages reported for the snug-fitting lumber wrap. Slip-resistant polyethylene coating is said to prevent cargo from shifting in transit and to retain its properties over a wide temperature range, to guard against package failure.



only by producers of products which have never before been packaged, but also by packers whose products require more than normal protection against climatic onslaughts and the cumulative stresses of long-distance shipping.

Consumer look for lumber

From the rich timberlands of the West Coast, which already have made packaging news on these pages,† a producer of finished and semi-finished lumber is sending its quality wares to nationwide markets in a glossy, polyethylene-coated kraft-paper wrap that constitutes a sales-making blend of protection, brand identification and colorful eye appeal.

The packager is Union Lumber Co., Fort Bragg, Calif. The goal it has staked out for the new package is the same as that set for any supermarket item: to get customers to buy by brand.

Up until last year, the Union Lumber company (1,200 employees) had clung to the tradition of shipping unpackaged board in carload lots to retail yards, for sale by the piece or in bulk quantities. Besides the absence of brand identity in this type of marketing, a chief factor in the company's decision to go to packaging was that "loose" lumber was exposed to scuffing, dirt and moisture from the moment of shipment to the moment of use.

Particularly for such higher-grade board as redwood siding, the complete lack of protection was damaging to the quality image the firm was attempting to build up through a promotional program.

† See "Wrapped Lumber," Modern Packaging, July, 1958, p. 136.

The sealed wrapper which Union Lumber now uses consists of 60-lb. colored kraft paper, extrusion coated with polyethylene. Containing four or more boards, each package is double folded and heat sealed at the top. Gummed paper labels pasted over the hand-applied wrapper's heat-sealed ends contain size, content and other product data. Brand identity is achieved via a repetitive-pattern design of the company name and logo printed on the kraft wrap. The moisture-resistant polyethylene coating, which is applied to the wrap after printing, adds depth and richness to the surface design.

As proof of this package's performance, Union Lumber points to tests in which wrapped lumber was shipped cross country by box car, open flat car and truck. In each instance, says the packager, the wrap remained intact and its contents arrived at destination in a clean and dry condition, despite prolonged exposure of the package to the elements.

Polyethylene is ideally suited to this packaging application for reasons other than its property of moisture resistance, the company says. The coating reportedly prevents adhesion of stacked packages even in the highest temperatures that may be encountered in shipping or storage. At the other extreme, the coating is said to remain pliable at temperatures as low as minus 60 deg. F., thus preventing cracking which would expose the paper substrate and lead to moisture penetration. Union Lumber notes also that the slip-resistant characteristic imparted by the polyethylene coating lessens the tendency of packages to shift in transit, thus

serving as a further protection against damage.

Another considerable advantage reported for wrapped lumber is that it saves time and labor in the loading and unloading of shipments.

From a merchandising standpoint, Union Lumber says consumers—whether professional builders or home handymen—like the convenience and protection afforded by the polyethylene-coated paper wrap well enough to re-order by brand name. For the professional, lumber in a wrap minimizes the job of trucking away board loads, while easing inventory and job-site storage problems. For the handyman, the wrap always assures him of clean board for that do-it-yourself project.

In response to user acceptance of wrapped lumber, says the company, it plans to package increasing amounts of its production. An indication of this acceptance is the report by Union Lumber that it will switch from manual to automatic packaging on machinery now under development.

Now it's packaged steel

One of the nation's big steel producers is now shipping three-ton to five-ton bundles of sheet steel abroad in neat, economical "packages" that guard the product against rust-causing moisture and the damaging impacts of repeated hoist handling. In packaging this product, the company seeks two objectives: (1) to hold its export sales market against European competitors by assuring safe delivery of its product and (2) to cut down on costly replacement of travel-battered sheet.

Because of the long shipping distances involved, the need to replace surface-damaged sheet steel was formerly a persistent threat. And the receipt of damaged merchandise was a distinct annoyance to customer companies, who had to put in a claim, then wait for the replacement shipment. However, says the steel producer, the adoption of this extra-protective packaging has virtually eliminated replacement requirements, while making handling easier both for the exporter and for its customers.

Doing the packaging job for this company is General Sheet Steel & Plate, Inc., Cleveland (100 employees, \$3,500,000 sales). The materials required for the four-man packaging operation are: a two-ply covering of water-resistant, asphalt-laminated wrapping paper; a sheet of 120-lb. kraft paper; two sheets of 0.025-gauge annealed steel; a wooden skid, and steel strapping. Packaging of the

High-grade sheet steel in three-ton



Multi-ply package used by General Sheet Steel for bundles of automotive-grade steel requires an inner wrap of kraft and special water-resistant paper. Outer protection is provided by overlapping sheets of annealed steel, which are flanged by hammering to form a water-resistant and impact-resistant "jacket."

bulky sheet steel is said to require an average time of only 15 min, per bundle.

The first step in the packaging procedure is to lay down the wooden skid over a criss-cross pattern of steel strapping. Then an overhanging sheet of annealed steel is placed on the skid, followed by the low-cost, water-resistant wrapping and the kraft (which is needed to absorb any residual moisture which may be contained in the bundle of steel sheet). To facilitate accurate positioning of the steel bundle, crayon guide-line markings are then made on the kraft-paper sheet.

After centering the bundle on the skid, the paper wrappings are hand folded tightly over the entire bundle and the bottom sheet of annealed steel is flanged into a tight-fitting tray by hammering it with wooden mallets. The second sheet of annealed steel is placed over the top of the wrapped bundle and it, too, is flanged by hammering. This snug, compact package seals the contents for protection against surface abrasion and impact damage as well as against the entrance of moisture.

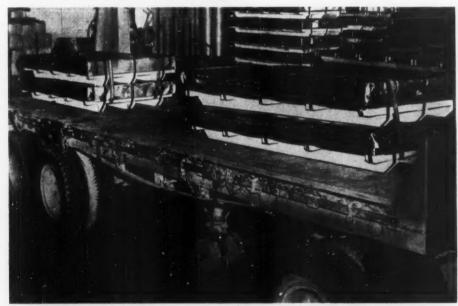
The final packaging operations are to secure the steel strapping and to stencil appropriate identification data on a side wall of the steel jacket. Indicative of the efficiency of this manual operation is the company's statement that it is capable of packaging steel tonnage that is equivalent to 15 railroad carloads in a single day.

To expedite handling, two of the "packages," which may weigh as much as 15,000 lbs. each, are steel strapped together to form a master bundle. When loaded into open rail cars for shipment to seaports, the master bundles are covered for weather protection with a huge sheet of the same water-resistant wrapping used in the package itself. This operation usually is performed out of doors. But if the weather is bad, it is done in the plant before moving the bundles to the railroad siding.

General Sheet Steel reports that it pre-tested this steel-packaging program thoroughly before adopting it as a standard. According to the company, the method and the materials are so effective that damage to contents during shipping and handling virtually has been eliminated.

SUPPLIES AND SERVICES: Lumber—Printed wrap by Crown Zellerbach, 1 Bush St., San Francisco 19, using Eastman Chemical Products' polyethylene for the coating. Steel—Water-resistant reinforced wrapping paper by American Sisalkraft, Attleboro, Mass.

to five-ton export 'packages'



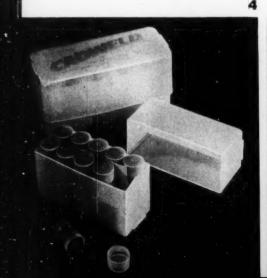
Ready for shipment to scaports, the compact protective containers are steel strapped to wooden skids, then are strapped together in units of two to form a master bundle. Since adopting packaging for sheet steel, the company reports the elimination of the former persistent threat of replacing rusted or handling-damaged merchandise.





- 1 An idea for fast pictorial identification between two varieties of the same product is suggested by bright new labels on Ocean Spray canned cranberry
 - sauces. For whole-berry sauce, the design motif suggests individual berries; for jellied sauce, slices of the strained product are illustrated. Strengthened shelf appeal of new labels is company's bid to stimulate year-round use of what generally is considered a seasonal food. A whiter, varnished-stock label paper is calculated to add visual impact to the bright red product illustrations. Design, Donald Deskey Associates, New York.
- 2 Red Wing Co. achieves an upgraded-quality image for jellies and preserves via the adoption of gracefully tapered glass jars and sophisticated new label design. The new packaging involves the company's Red Wing and Schimmel lines. For easy stand-up and stackability—and to simplify the removal of contents—the jars are broader at the base than at the top. White-coated metal lug caps offer opening and closing convenience. Stylized product illustrations on the paper labels help identify among flavors. Jars, Armstrong Cork, Lancaster, Pa. Jar and label design, Robert Kennedy Associates. Chicago. Closures, White Cap, Chicago.
- 3 A one-piece paperboard boot that displays two different-size and different-shape glass containers

- while holding them securely in place makes an effective self-selection deal package for the introduction of Skin Fresh, Chesebrough-Ponds' new liquid toiletry product. The product is offered together with a jar of Ponds cold cream, in a "75 cents off" promotion. For display appeal, both containers-the slender clear-glass bottle for Skin Fresh and the squat opal jar for cold creamproject through die-cut openings in the slanted front panel of the three-dimensional boot. The two containers are inserted from the bottom of the boot. Simple jig facilitates positioning of displays for loading, after which a tab closure is slid in to lock the containers in position. Design, Graficon, Inc., New York. Paperboard boot, Downingtown Paper Co., Dowingtown, Pa.
- 4 A sturdy long-life container for handy use on outdoor jobs to keep the product dry up to the moment of use is a molded-polyethylene box adopted by Erico Products for Cadweld cartridges. These cartridges contain powder used in heat welding of electrical connections in open-field work, and must be constantly protected against moisture to assure fast, positive ignition. The tape-sealed, break-resistant plastic box also serves as a compact storage container with long effective shelf life, says Erico. Polyethylene container, Zenith Plastics, Cleveland, using Eastman's Tenite.









PAGRAGING

3

- An interesting innovation in deal packaging—and one that is adaptable to a broad variety of products—is the white polyethylene-net bag in which Lentheric is introducing Tweed hair spray. The self-selection package contains a regular-size bottle of the hair-care product plus a purse-size aerosol flask, given at no extra cost. A paper tag attached to the bag calls attention to Lentheric's free offer. Tied at the top to prevent accidental product loss and to discourage pilferage, the plastic-net bag permits visibility of the containers it carries. "Vexar" polyethylene-net bag, Du Pont, Wilmington, Del.
- 6 Vicks VapoRub packaged in a vinyl plastic squeezedispensing tube has been seen on sale in Providence,
 R.L., markets—although Vick Chemical has made no
 announcement of this radical departure from its
 familiar blue-tinted glass jar. The shatterproof
 flexible-plastic tube stands on its broad, flat-topped
 closure. A die-cut, open-face carton that offers a
 full view of the printed plastic tube while holding
 it firmly in place is used to merchandise the convenient new VapoRub container on self-selection
 shelves. Extending from the top of the carton is a
 riser panel telling of the tube. Vinyl tube, Thatcher
 Glass, Plastic Container Div., Nashua, N.H.
- 7 New convenience for the packager as well as for the consumer is reflected in the aluminum-foil pan

package in which Gourmet Corner Frozen Foods Co. markets an assortment of 12 frozen hors d'oeuvres. The container features a raised interrupted vertical-curl rim which is designed to facilitate in-plant lidding and crimping operations. In the home, says the packager, this feature simplifies opening of the heat-in foil pan. Two varieties of frozen hors d'oeuvres—meat and cheese and fish and cheese—are offered by Gourmet Corner. Colorful table-setting illustrations on the paperboard lid of the pan help supermarket shoppers identify the two varieties of snack items. Foil pan, Kaiser Aluminum & Chemical Sales, Oakland, Calif.

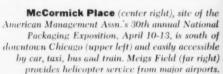
8 Chock Full O' Nuts subtly puts across a "premium quality" image for its new instant coffee by introducing the product in a key-opening vacuum metal can. The 4-oz. can—which represents a distinct departure from traditional glass packaging for such products and which is one of the first metal containers seen for an instant coffee since the pioneering days of the now defunct G. Washington brand—is calculated to achieve stand-out competitive appeal on retail shelves. For family identity, surface design on the new container closely resembles that for the packager's regular ground coffee in 1-lb. tins. As in the can for regular coffee, the instant-coffee can includes a plastic measuring spoon. Metal can, American Can, New York.





A new setting for

Chicago's brilliant McCormick Place, three blocks long and 10 minutes from the Loop, will house on one floor this largest of all AMA expositions, opening April 10; concurrent Packaging Conference will be held in the same building





Main entrance on Lake Shore Drive near southwest corner of huge new McCormick Place leads to a large lobby, theater, meeting rooms, restaurant and cafeteria. Stairways and high-speed escalators from the lobby serve exhibit area on the second floor.

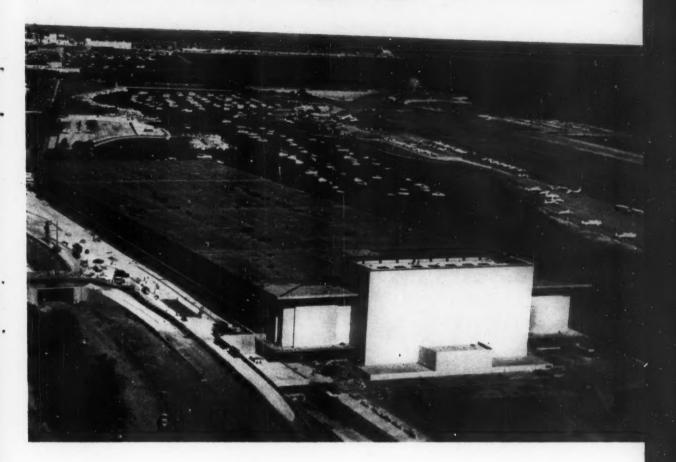


visitors to the two big national packaging shows this year will be treading new ground, enjoying the facilities of brand new exposition halls.

Both the American Management Assn.'s National Packaging Exposition April 10-13 in Chicago's lakefront McCormick Place and the Packaging Machinery Mfrs. Institute's Machinery Show in November in Detroit's Cobo Hall will introduce packagers to the latest creature comforts built into new structures specifically designed for such events.

Most important of all, perhaps, the AMA show will now be about three miles closer to the heart of Chicago than the vast but distant International Amphitheatre. Second, McCormick Place, which is located just south of the Loop within easy reach by car, taxi, bus, train and even helicopter, also provides everything under one roof—a huge exhibit area on one floor for the show itself, meeting rooms for the concurrent National Packaging Conference.

the Packaging Show



a large dining room and cafeteria, and private meeting and eating facilities for smaller groups, plus a retail shop and even an art gallery.

Here, on Monday, April 10, the 30th annual AMA show will open for a four-day run. Its record 160,000 sq. ft. of occupied space—larger than the International Amphitheatre's 146,000 and the New York Coliseum's 130,000—has been sold out for months. Number of exhibitors—351—will not top the AMA record of 390 in New York in 1958—mainly because of the many mergers in the field—but simple arithmetic shows that the fewer exhibitors are taking more average space this year, undoubtedly to accommodate new acquisitions. Nor would the expected attendance of about 30,000 visitors break the 35,400 record set in 1958, though it should top the 27,750 figure that was reached at Chicago's last show, held in 1959.

Because there hasn't been a national packaging

show since last year's AMA exposition (the Machinery Show in the fall is biennial), the 12-month output of many packaging-machinery manufacturers will, according to the exposition managers, be seen for the first time, plus the newest in materials, containers, accessories and services.

These thousands of new, improved or standard

Your complete personal guide to the AMA National Packaging Exposition and the National Packaging Conference has been prepared by MODERN PACKAGING. You will find this convenient, pocket-size program inside the front cover of this issue. Fold it up and take it with you to Chicago. It contains an alphabetical list of all show exhibitors (with an easy method of checking off those you wish to visit), a floor plan identifying booth locations, a full conference program and a map showing McCormick Place in relation to the Loop.

packaging resources will be displayed in a 10-acre building that stretches for three blocks just south of Soldier Field between Lake Shore Drive and Lake Michigan at 23rd Street. Named for the late Col. Robert R. McCormick, editor and publisher of the Chicago Tribune, which campaigned for the erection of such a modern building, the vast \$35,000,000 structure was opened last Nov. 18.

Two basement floors house heating and air-conditioning equipment, kitchens and other service facilities. The ground (first) floor has a large entrance lobby near the southwest corner, a 5,000seat theater, a 500-seat little theater (where AMA's National Packaging Conference will be held), more than a dozen smaller rooms, a glass-walled, lakeview restaurant seating 650 and a cafeteria with three lines to handle 1.800 persons per hour, both Hilton catered. From the lobby, two stairways and two high-speed escalators take visitors to the main exhibit floor, large enough to contain six football fields. Although it can be divided into three separate exhibit halls by the use of retractable partitions, AMA will use the entire floor, plus a small area on the same level east of the theater.

For exhibitors, there are 13 enormous doors to admit trucks or buses directly to the exhibit floor, plus six loading-dock areas capable of handling 54 trucks at once. Electricity, water, drainage, telephone and other services are immediately available to all display sites. Lighting at the floor level in the exhibit hall is 50 candlepower, sufficient for all display purposes except any desired spotlighting. The street exterior of the building is decorated with several huge sculptured panels.

McCormick Place has two large parking areas, north and south of the building. From the Loop, it is 10 min, by car, taxi or bus and 15 min, by Illinois Central suburban trains to 23rd Street, one block west. Both the 1933-34 Century of Progress and 1948-49 Railroad Fair were staged on this site.

Open to the public for a total of 33 hrs., the Packaging Show will run on Monday, April 10, and Wednesday, April 12, from 10 a.m. to 6 p.m.: Tuesday, April 11, from 10 a.m. to 9 p.m., and Thursday, April 13, from 10 a.m. to 4 p.m. For the fourth consecutive year, a \$2 registration fee will be charged in order to screen admissions. Rapid registration tickets to be filled out in advance may be had from the show management, Clapp & Poliak, 341 Madison Ave., New York 17, from American Management Assn., 1515 Broadway, New York 36, or from the show exhibitors.

More of the show crowd than usual is expected to attend the concurrent National Packaging Conference because, in contrast to New York and previous Chicago shows, the conference sessions will be in the same building as the show. This threeday meeting will open at 9:30 a.m. on Monday, Tuesday and Wednesday, ending each day at noon, with luncheon sessions being held both Tuesday and Wednesday from 12:30 to 2 p.m.

Details of the conference program appear in the show insert under the front cover of this issue.

The conference fee for AMA members is \$40 for all sessions and \$10 for individual morning sessions; for nonmembers it is \$55 and \$15. Luncheon sessions are \$7 apiece for all. Conference registrants do not have to pay the show registration fee, but the show fee will not admit to conferences.

John C. Clay, sales-promotion manager of the



Mr. Clay

National Starch & Chemical Corp., is chairman of the show Exhibitors' Advisory Committee and also of an AMA reception and dinner Monday, April 10, at the Palmer House to commemorate the 30th anniversary of the show and

conference. Five hundred packaging executives and other business leaders have been invited.

Following, listed alphabetically, are details of exhibits from all exhibitors who answered Modern Packaging's questionnaire before the deadline date. A complete list of exhibitors up to press time appears in Modern Packaging's Show & Conference Guide, inserted under the front cover of this issue.

A-B-C PACKAGING MACHINE CORP. Booth 835. Exhibit of new Dialmizer automatic case sealer with hermetically sealed glue system that climinates necessity of daily clean-up. Personnel: J. L. Neal, R. Weatherford, B. J. Swords, R. Stevens, W. Haynes, W. E. Cranor, R. S. Bonzi. Hotel: Palmer House.

ACME STEEL CO. Booth 246. New Model F7 dual-head automatic strapping machine demonstrated on a production-line conveyor set-up; single-head F7 strapping machine; complete line of hand strapping tools and accessories; wire-stitching machines; new wide-crown Silverstitcher. Personnel; W. S. Huss, N. L. Anderson, H. D. Connell, J. W. Karstens, A. G. Denne, R. W. Hardie, J. H. Prout, N. J. Lynch, W. C. Quednau, R. M. Snodell, J. R. LeMaster.

AIR REDUCTION SALES CO. Booth 1115. Two themes featured: "Immersion freezing with liquefied gases" and "Inert gas sparging of food products." Personnel: R. C. Webster, J. S. Hinn, S. Saal, W. H. Montgomery, R. M. Trider, E. J. Benson.

AJUSTO EQUIPMENT CO. Booth 102. Exhibit of new Ajustrite chair with folding back rest and new fibre glass chair, Personnel: S. W. Heer, R. Dawson. Hotel: Avenue Motel.

ALGENE MARKING EQUIPMENT CO. Booths 313, 314. Exhibit of four-way printer for automatic four-side printing of set-up boxes; flat box printer which prints all six sides of cartons in sizes to 50 by 65 in. in one pass at speeds ranging as high as 4,200 cartons per hour. Personnel: M. Mann, M. Amin. Hotel: Sherman. [Continued on page 304]

How GM uses

Hand-loaded machines serve the world's biggest manufacturer just as they do the smallest packager; two different types are used, at AC for spark plugs and at-Buick for service parts

n packaging, it's the size of the job—not the size of the company—that determines the answers. General Motors Corp.—the biggest manufactur-

General Motors Corp.—the biggest manufacturing company in the world—has gone extensively into blister packaging for spark plugs and small parts. Yet, in two GM divisions doing the blister packaging described here, semi-automatic, handloaded machines, such as any packager might use, proved best suited to the job. GM's blister packaging provides an interesting study of two different types of machine, producing two types of packages.

One of the units is a former and sealer that produces a butyrate blister that is heat sealed to bleached-kraft paper to contain Buick Division replacement parts which were previously placed by hand in kraft envelopes and folding cartons.

The other unit has no thermoforming capacity, but uses pre-made acetate blisters to hold AC spark plugs on pyroxylin-coated paperboard cards. Lawnmower spark plugs are packed one to a card; marine plugs, in pairs. This packaging replaces hand-loaded folding cartons, one for each plug.

Sales results, GM reports, indicate that the company acted wisely in effecting these departures in package appearance and in production methods. Packaging economies are accompanied in both instances by improved product protection and the maximum display value of blister transparency.

Buick is using its blister-pack machine to package more than 400 single and multiple replacement parts

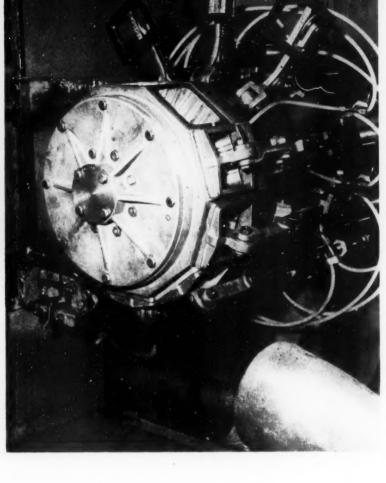


Paper-backed blister pack houses Buick replacement parts. Heat-sealed bleached-kraft lid imprinted with stock data and logotype tears away for easy access to product in butyrate blister.





Variety of Buick replacement parts is accommodated by blisters of different sizes, all of which are formed, filled and scaled on one semi-automatic line.



Vacuum drum for forming Buick blisters revolves counter-clockwise. Web of acetate feeds from lower left, where it is drawn through pre-warming oven and over die-forming eavities on drum. Sealing clamps hold web in place over cavities during forming, then release automatically at end of the cycle.

in blisters of varying sizes. Despite added material cost, total unit packaging cost is less than that of the former hand method because of substantial increases in packaging speed and reduced labor costs. Moreover, the size of Buick's packaging-material inventory has been greatly decreased. The hand-packaging operation had called for more than 40 different sizes of folding cartons.

Because paper rather than a backing card is used in this package, Buick runs 15-mil butyrate on this machine, which produces blisters up to $5\frac{1}{2}$ in, in length and width, and $1\frac{1}{2}$ in, in depth.

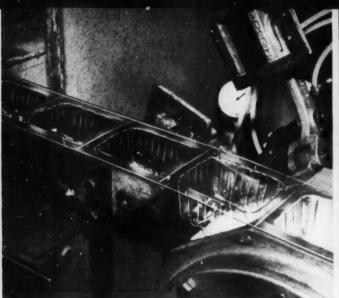
The web of butyrate, mounted underneath the forming section, is drawn up through a pre-warming oven at the far end of the machine and onto a vertically mounted revolving drum which contains the blister-forming cavities. Buick has six interchangeable drums. While drum diameter remains constant, the number of cavities on each drum ranges from six (for 5½-in, blisters) to 28 (for 2-in, size). Blister output, depending on cavity size, is from 60 to 300 per minute. The machine performs 10 complete blister-forming cycles per minute.

After it reaches the drum, the softened butyrate is drawn down into the cavities by vacuum. As air is evacuated, a rubber-insulated sealing clamp locks into position over each cavity. These clamps remain in place during the 4-sec, forming cycle. They release automatically when forming is completed, the web of blisters becoming its own conveyor.

The unpowered, free-revolving drum is controlled by two sets of spring-loaded rollers at the sealing end of the long machine. Their constant pull on the web of finished blisters keeps the drum revolving. The actual forming mechanism is air powered.

As the web of formed blisters emerges from the drum, it is drawn—open side up—through the loading section and toward the sealer. Buick parts are loaded into the blisters by a crew of operators stationed along either side of the machine between the forming and sealing areas. Each blister may be filled with one good-sized part, or as many as 12 small ones, depending on the nature of the part.

After filling, the blisters move on to meet a web of 300-lb, bleached kraft mounted above the sealing section. The paper has a thin coating of heat-seal-



Self conveyor is created by the formed blisters as they emerge from the top of the drum and move left toward the loading and sealing stations.



Loading is performed manually as blisters pass by. Note vertical web of imprinted kraft at far end, which is heat scaled to strip of blisters before packages are severed.

able adhesive on one side. It feeds down through an imprinter, where it receives name, part number and Buick crest, and then travels through a series of metal tension rollers. Finally, the kraft is drawn over two rollers, heated to 375 deg. F., which melt the adhesive on the kraft coming in from above and also softens the edges of the blister moving in from underneath the rollers.

As the paper and blister join, side seals are made by a pair of rollers, running parallel with the web of blisters, which press the kraft firmly against the blister's tacky side rims. These rollers can be quickly adjusted to differing package widths.

Crosswise seals and package cut-off are combined in one operation. They are actuated by a "profiler" which automatically measures the length of the package. The profiler is a right-angled rod 14 in, long. One end of the rod carries a small wheel, the other is connected to a microswitch. As the lead blister approaches the cross-sealing rollers, the profiler's wheel meets the incoming blister and rides along its outer edge until it drops into the space between the lead blister and the one following. This trips the microswitch at the other end of the profiler actuating the relay which determines the exact cut-off point.

The cross-sealing bar, which also contains a shear, moves down with a rocking motion. It first applies pressure to the back edge of one package, then to the leading edge of the package following. Finally, it cuts between the seals and "rolls" back into relaxed position. This rocking motion is important because it assures maximum contact between the surfaces to be joined. Finished packages are then expelled directly into corrugated shippers.

That small machines, too, can offer a value in versatility is exemplified by the semi-automatic blister scaler running at GM's AC Spark Plug Division. It is being used to [Continued on page 289]

SUPPLIES AND SERVICES: Buick replacement parts—Packmaster 58 blister-forming and heat-sealing machine by Sundstrand's Sundstrand-American Broach Div., Ann Arbor, Mich. Butyrate film by Midwest Plastic Products, 1801 Chicago Rd., Chicago Heights, Ill., using Eastman Chemical's resin; butyrate film also by Celanese Corp.'s Celanese Plastics Co., Newark 2, N. J. Heat-seal-coated bleached kraft by Nashua Corp., Nashua, N. H. AC spark plugs—Blister-sealing machine by Tronomatic Machine Mfg., 25 Bruckner Blvd., New York 54. Cellulose acetate for blisters by Celanese Plastics. Letterpress-printed cards by Diamond National's U. S. Printing & Lithograph Div., 575 Madison Ave., New York 22.

Loading-sealing equipment for AC lawn-mower and marine spark plugs is a six-station circular unit revolving clockwise. Prefabricated blisters are positioned and loaded at left rear, then backing card is positioned at rear and sealed at right. Completed packages, after being removed from the unit, are cartoned in the foreground.



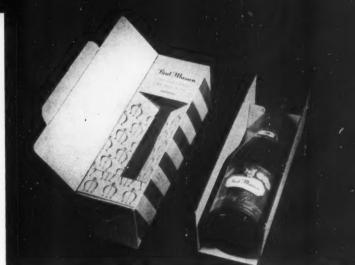
To get unusual display for a line of gift-packed champagnes, a California winery has adopted a die-cut carton with a fifth flap that is closed for shipping, then opened to show bottle

WINDOW CARTON WITH



Opened for display (right), this gift carton for Paul Masson champagne has a die-cut panel that displays the bottle when an overlapping fifth panel is opened by the dealer. Bottle is held in position in front of the window by a white-lined corrugated cradle.

Construction features of carton and corrugated insert include automatic bottom flaps on the carton (left) that permit fast set-up and die-cut flaps in the window that serve as a printed backdrop for the battle. Corrugated cradle (right) replaces conventional shipping-case dividers,



A DOOR

The answer to a long-standing problem of gift display for wines and liquors may be a new "window carton with a door," now in use by Paul Masson Vineyards, Saratoga, Calif., to merchandise its giftpackaged line of fine champagnes.

The new box is simple. It is a gravure-printed, solid bleached sulphate window carton with a fifth panel which is folded over the window and tucked in during shipping, then opened by the dealer to display the bottle. To increase the rigidity of the package, the carton is reinforced with a white-lined, B-flute corrugated insert that surrounds the bottle on three sides. This die-cut and scored collar fits the box to full depth and grips the bottle at the neck, holding it squarely to the front so that the label is always in the window section for the shopper to see.

Die cutting of the window provides side panels which are tucked in before the bottle is inserted to provide a decorative background of the same design as is used for the outside of the box.

Most gift packages for wines and spirits are standard chipboard cartons that are filled from the top and closed. While adequate in most respects, such a package has been found unsatisfactory by Masson for display because the box hides the contents and few dealers trouble to remove a bottle from a package and show it alongside the display.

The new carton is made from 22-point solid bleached sulphate stock, measures 33/4 by 35/8 by 127/8 in, and has a tuck top and automatic bottom flaps for fast et-up. A high-gloss varnish overcoat prevents scuffing of the gravure-printed design and the package is overwrapped with cellophane, which may be readily removed for display.

According to Interstate Commerce Commission regulations, bottles of wine must be separated in the shipping case by corrugated board. However, the winery has ascertained that the corrugated stiffeners inside the cartons fulfill this regulation. The gift packages are placed in the shipping case so that the window side of one carton, where there is no corrugated, is opposite the side or rear panel of another carton. Only a little more corrugated board is required for this pack than for conventional corrugated case dividers, according to winery officials.

The new package is being used for the four types of Paul Masson Champagne. Color scheme for the "brut" type is two shades of a warm and golden brown. The extra-dry champagne utilizes a light-and dark-green package. Pink champagne has a pink and black color combination and the sparkling burgundy uses a layender and dark maroon.

The printed design on two sides of the carton is a pattern of many small replicas of a new trademark recently introduced by the winery—a stylized "M" that suggests a stemmed wine glass and bunch of grapes. The other two sides of the carton are printed in diagonal stripes to carry out the gift theme.

Some of the thinking behind the Masson champagne gift package is explained by the company's director of marketing, Ernest Mittelberger: "One of our objectives is to make a pitch for part of the billion-dollar gift market. Champagne makes an ideal gift, yet is often overlooked. By encouraging its purchase as a gift, we assure it getting into more and more hands of prospective customers who may become steady users thereafter. The gift package also helps to win for the winery greater recognition and display of the Paul Masson brand."

To prevent the gift-packed champagne from going to institutional buyers, where the carton would be simply discarded, the shipping cases containing the cartons are clearly identified with an image of the gift box reproduced on the outside of the case. SUPPLIES AND SERVICES: Gift carton by Fibreboard Paper Products Corp., 475 Brannan St., San Francisco 19. Design by Gould & Associates, 306 N. Doheney St., Los Angeles 48.



Pressure-sensitive labeling ends glue smears

Improved container appearance and a 50% reduction in labor costs are reported by Ervan Lucas Bols Distilling Co., sub. Brown-Forman Distillers, Louisville, since switching to automatically dispensed pressure-sensitive shoulder labels for Bols liqueur bottles. The company formerly used paper labels which were applied by hand after spreading liquid glue on the backs. This operation required four workers: one to apply the glue and position the labels on the bottles, two to reposition and smooth the labels and another to wipe off excess glue forced out from under the labels by hand pressure. Despite all efforts, says Bols, residual glue smears on the bottles posed a distressing problem in quality control.

The adoption of pressure-sensitive labels has eliminated this messy appearance while reducing labeling fime and halving labor requirements, the company notes. An automatic label-dispensing machine, serviced by two operators, is mounted near the bottle conveyor. As filled and scaled bottles travel by, operators apply the pressure-sensitive shoulder labels in one swift and simple hand motion. Labeling machine and labels by Avery Label Co., Div. Avery Adhesive Products, Inc., Monrovia, Calif.

GOST GUTTERS



Prescription for economy

"Operator fatigue" may not be defined in any medical textbook, but it can be a costly malady to many packagers. Caused by prolonged handling of heavyweight containers, it manifests itself in a definite slowdown of production. Western Charcoal Corp., Renton, Wash., has diagnosed the ailment in its own operations and effected a cure—at a substantial reduction in packaging time and costs. The company is a producer of charcoal packaged in 10-, 20- and 40-lb, carry-handle bags. Formerly, these bags were closed by manual stapling in an operation that required the worker to lift and hold the bags upright with one hand while operating the stapler with the other. It was, says the packager, a tedious procedure that decelerated as the day progressed.

Installation of an automatic, foot-actuated stapling machine that requires no bag lifting has increased packaging speed by 75%, Western Charcoal reports. In the new operation, open, filled bags travel by conveyor to the closing station, where the operator has both hands free to fold over the bag top and apply the carry handle. At a touch of the foot control, the stapling machine does the sealing job. Stapling machine by Bostitch, Inc., East Greenwich, R.J.

Shipper-testing program cuts costs and product damage

Inevitably, costs go down and container efficiency goes up when package testing is treated as a science. An enthusiastic subscriber to this packaging philosophy is Syracuse China Corp., Syracuse, N.Y. Since the inception of an intensive package-research and testing program, the company reports, shipping-carton inventory has been reduced from 50 to 18 styles, shipment damage to fragile china has been all but eliminated and packaging time has been accelerated via development of simplified protective carton inserts.

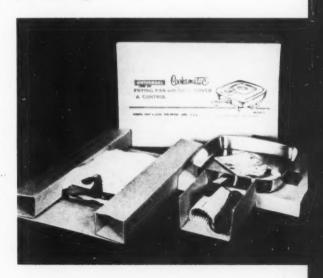
First step in this program was to whittle the number of carton styles, to eliminate unnecessary inventory. Next, the packager installed a mechanical transportation simulator to supplement drop testing (traditionally the industry's sole measure of shipper performance). At far less cost, says Syracuse China, this machine simulates in minutes the vibrations, shocks and accelerations of truck or rail shipment. Test results obtained from use of this unit enabled the packager to develop simpler and more protective carton partitions that also are easier to load. The accompanying illustration compares the new style (left) with the old. Transportation simulator by L.A.B. Corp., Skaneateles, N.Y.



One carton replaces two, at a 41% saving

Conscientious efforts to protect delicate or shock-sensitive products from the rigors of shipment sometimes lead to wasteful overpackaging. But the problem can almost always be solved and one way to do it is through close cooperation with the package-engineering force of your container-supplying company. As a case in point, such mutual development of a compact, single shipping container for an electric fry pan—replacing a two-carton unit in which the pan and its lid were packed separately—has resulted in a 41% saving in packaging-material costs to Landers, Frary & Clark, New Britain, Conn. The new corrugated shipper features die-cut, folded corrugated inserts that partition the pan and lid, suspending them for protection against external impact.

In addition to upgraded protection and lower material costs, the new single shipping carton is reported to offer savings in packaging time, simplified inventory control and a reduction in storage requirements. Dealers and consumers like the new container, too. It takes up less shelf space and is easier to carry than the former two-carton pack. Corrugated shipper and inserts by Olin Mathieson Chemical Corp., Packaging Div., 460 Park Ave., New York 22.



The first polypropylene tube

Melissa's squeeze-out make-up introduces the newest plastic in a new form, one which should be of interest for viscous products with oil or grease content



Feminine appeal is provided by pink-and-blue offset printing on pink-colored polypropylene. Tubes are merchandised on display cards. Unsealed, uncapped tube is shown at the left.

Ease of application is assured by squeezing small amount of product on the fingertips for blending gently over the face and throat.



Another promising use for the newest plastic, polypropylene, lies in the squeeze-tube field, if its first commercial application, by Melissa, Inc., New York, for "Flow and Glow" is an indication.

The versatile new plastic—previously seen in molded aerosols and in film form—was chosen in this case primarily for its exceptional grease resistance and retention of fragrances. Flow and Glow is a scented, creamy product with an oil base. But other basic properties contribute to a sum of advantages unavailable in any other one type of plastic heretofore used in tube manufacture, according to Melissa: good moisture retention, chemical inertness, light weight, attractive colors, ease of printing.

The high yield of polypropylene, due to its low specific gravity (at 0.905, the lightest of all plastics), permits these tubes to compete favorably in price with other types of plastics tubes, although the resin has not yet reached its potential low cost. The tube's light weight also saves in shipping costs.

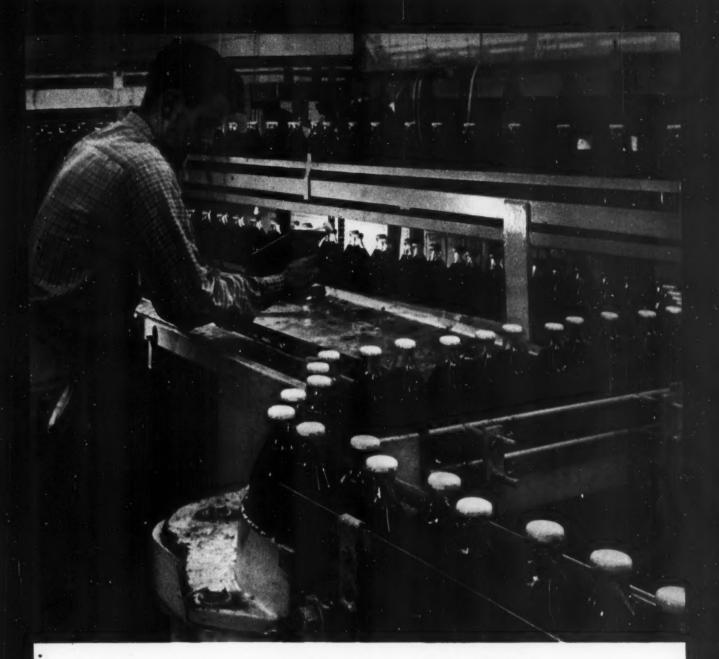
. Melissa's tubes are made by an extrusion-injection molding process, with neck and shoulder welded to the tubular body by a special process. They are filled from the bottom on conventional tube fillers and heat sealed on standard plastics tube sealers at increased temperatures. The melting point of polypropylene is 320-330 deg, F.—a characteristic which should make it suitable for packaging pharmaceuticals requiring heat sterilization.

No problem of collapse during filling has been reported in the Melissa application—a condition sometimes troublesome with thin-wall plastic tubes.

Flow and Glow is being marketed in tubes of two sizes in variety and drug chains.

Polypropylene tubes may be made in a variety of opaque colors or clear transparent with mat or high-gloss surface. In the supplier's tests for resistance to oil, using olive oil at 158 deg, F., permeation occurred after 320 hrs., compared with 5 hrs. for low-density polyethylene, Polypropylene also has F&DA clearance for food packaging.

SUPPLIES AND SERVICES: Tubes by Thatcher Glass Mfg.'s Plastic Container Div., Nashua, N.H., using Hercules "Pro-fax" polypropylene.



"Knox furnishes 85% of our juice bottles," says production manager of large cranberry cooperative

"Since Knox first supplied us with glass containers four or five years ago, we have increased our consumption of their bottles from 20 per cent of our total to 85 per cent," says the Production Manager of one of the nation's foremost producers and packers of cranberries.*

"This represents a considerable increase in quantity as well as in percentage, because our cocktail production has gone up 50 per cent since 1957, and has quadrupled since 1950," he said.

"There are two very important reasons why we use Knox Glass in such a large proportion. First is their "Name available on request bottle quality—we have enjoyed a tremendous reduction in breakage over the last four years. Glass breakage is not a real problem with us any more.

"The other benefit we enjoy from using Knox is their extremely dependable delivery. They deliver when they promise they will—and this dependability has allowed us to reduce our own bottle inventory from 50,000 cases to 15,000 cases for emergency use only.

"We've found we can depend on Knox."

Contact the new/Knox Glass for your glass container needs: Knox Glass, Inc., Knox, Pa., or any one of 37 sales offices.

the new KNOX GLASS

Research proposal at Michigan State

University School of Packaging offers industry a chance to join in multi-sponsor projects, covering four-year studies in six packaging areas, with sponsor benefits at low cost

A new program of research proposals covering six areas of packaging is offered by Michigan State University's School of Packaging, East Lansing. The program is a multi-sponsor venture, in which companies may participate financially in joint industry-faculty-student projects. Following are the six projects to be researched:

1. Control of damage in shipment. Work proposed covers investigation of methods of measuring shocks in transit to determine the adequacy of present assumptions; a study of the nature of the fragility of article-prone to damage in shipment and the development of adequate means of describing and measuring this fragility: examination of the properties of packaging materials and containers which make them effective in protecting against shock damage.

2. The folding resistance of scored bending board as a factor in highspeed filling and cartoning operations. Development of a score-testing device to reproduce machine bending conditions and enable more precise measurement of folding resistance as a function of loading rate, scoring parameters, grain direction, board type, board caliper and moisture content; study the variability in folding resistance as a function of scoring parameters; study the performance of cartons with scores of known folding resistance on filling machines operating at rates of production speed.

Flexible materials

3. Physical properties of importance in the use of flexible materials and combinations thereof on packaging machines. Study the forces involved in moving webs of material through typical wrapping machines, including the forces developed in cutting and sealing; develop methods to measure the physical properties of packaging materials under the configuration of forces produced in packaging machines and at the rate of loading involved in such machines; find new ways of transporting and folding flexible materials which are causing difficulty under presently used methods.

* 4. Sealing of flexible materials at high machine speeds. Research sealing methods currently used, including direct-heating methods, solvent-activated adhesives and radio-frequency heating methods; study the practicability of using energy applied at ultrasonic frequencies for sealing flexible materials, and explore other sources of energy.

Water-vapor permeability

5. Use of water-vapor permeability rates in design for a definite shelf life. Measure permeabilities for a selected group of widely used flexible packaging materials at temperature differentials of 10 deg. from zero to 120 deg. F. and relativehumidity differentials of 10% from 10 to 100% R.H.; investigate measuring and reporting the WVP of seals and joints; develop methods of designing packages for a certain predetermined shelf life, using analog computer techniques and evaluating these newly developed methods through storage tests.

6. Gas permeabilities as a factor in package shelf life. "Accumulate data on the gas permeability of a selected group of materials, using a method involving sweep gases so

that pressure differentials and RH differentials between the inside and the outside of a barrier can be controlled; study new techniques for measuring gas permeability more closely approaching use conditions; study gas-transfer mechanisms through joints and seams in barriers and develop methods for measuring and reporting joint effects in barriers; study and develop design of packages whose contents are subject to spoilage through oxidation or through anaerobic respiration.

\$3,000 annual fee

Direct cost of the work involved for each project will be approximately \$120,000 and the investigations are expected to extend over a four-year period. Cost of an individual sponsorship has been established at \$3,000 annually, payable in advance. Sponsors may withdraw from participation at the end of any year and new participants will be accepted at any time.

For the individual sponsor, results will be provided at a cost of less than 75 cents per manhour of research, based on an estimated 400 manhours per sponsor per year.

Reports will be issued to sponsors every six months, with a final report at the conclusion of the project. At least one seminar will be held exclusively for sponsor's personnel on the application of the result of the project to practical packaging problems. All project finding will be held for sponsors only, for one year after conclusion of the work.

Details may be obtained from Prof. James W. Goff, School of Packaging. Michigan State University, East Lansing, Mich.

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The SP 1260 = E For 36% x 49% sheets.

Production speed: up to 4500 sheets per hour.

Guaranteed die-cutting pressure: 550 U.S. tons.

Automatic Waste Stripper (optional).

Built-in heater for embossing on SP 1260 GC-E model.

The SP 1080 - E For 30% x 40% sheets.

Production speed: up to 4500 sheets per hour.

Guaranteed die-cutting pressure: 200 U. S. tons.

Automatic Waste Stripper (optional).

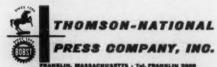
The SP 900 - E For 24% x 35% sheets.

Production speed: up to 5000 sheets per hour.

Guaranteed die-cutting pressure: 200 U.S. tons.

Automatic Waste Stripper (optional).

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BOBST



How AVISCO CELLOPHANE solved a major packaging problem

The problem? Costly rewrapping of self-service meats due to loss of bloom, loss of weight and torn packages. The answer? A film developed specifically to eliminate this problem—Avisco REO cellophane — now saving money and building meat sales for thousands of food markets across the nation—including 23 of the 25 largest supermarket chains. This is merely one example showing how one type of Avisco cellophane did a packaging job best. There are many types of Avisco cellophane, designed to give maximum protection

to a wide variety of products. Yet each type has the pure transparency and sparkle that only cellophane offers, and prints with jewellike quality. Equally as important, cellophane is unmatched for trouble-free performance on high speed packaging machines and for total packaging economy. Tell us about your problems or requirements in packaging. We'll be happy to help. Phone or write for an appointment

to help. Phone or write for an appointment with the Avisco cellophane representative in your area or a selected cellophane converter specializing in your field.

AMERICAN VISCOSE CORPORATION, FILM DIVISION, 1617 PENNSYLVANIA BOULEVARD, PHILADELPHIA 3, PENNSYLVANIA. SALES OFFICES ALSO LOCATED IN ATLANTA, BOSTON, CHICAGO, DALLAS, LOS ANGELES AND NEW YORK.

Machine studies by camera

A new technique using high-speed movie film enables technicians to observe what happens in mechanical actions moving faster than the eye can see. By J. A. Cairns* and J. Salisbury*

Defining a problem clearly is usually a very big step towards its solution, but when operations occur in very short periods of time, as with modern high-speed printing and packaging machinery, it is often impossible to see exactly what is happening in a single machine action occurring almost instantaneously. One tool that can help here is high-speed cinematography and we have, for some years past, been developing the application of this technique.

The action concerned is photographed on a film running at very high speed so that when the film is viewed at the normal projection speed the time occupied is very much longer. Thus this "time microscope" can expand a fleeting fraction of a second into several minutes' viewing time and a transient phenomenon far too fast for the eye to follow can be studied in detail at leisure.

The camera we use is a Fastax (Type W. F. 3), manufactured by the Wollensak Optical Co. and capable of taking pictures on 16-mm. film at speeds up to 8,000 frames per second. In a normal movie camera the film moves intermittently, but this is impossible at high speed. Instead, the film is driven continuously and the optical system contains a device which enables the image to follow the film during the period of exposure.

With the use of the Fastax camera, this is done by means of a rotation square prism geared directly to the film-drive sprocket, this prism acting also as a shutter. The exposure time is fixed at about one-third of the framing time, so that if the camera is operating at 1,000 frames per second

*Printing, Packaging & Allied Trades Research Assn., Leatherhead, Surrey, England, and †The Distillers Co. (Biochemicals), Ltd., London, Reprinted by permission from the PATRA Journal.

Figures 1 and 2. Over-all view of vial labeler (below), with close-up of the vial-feeding section (right) as shown in stills from movie strip moving at a rate of 300 frames per second.



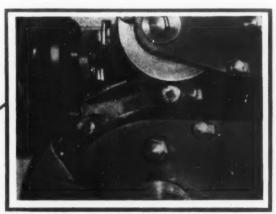


Figure 3. WHAT THE CAMERA SHOWS

Sequence of photographic stills from Fastax movie strip reveals causes of misplaced labels, jamming and breakage, stemming from high-speed action of the vial-feeding mechanism.



The vial rests on the quadrant face .



. . . and falls in the path of returning arm.



Sometimes the vial is stuck on a shoulder . . .



. . . and spins under the label drum.



Badly skewed vial may be thrown right out of machine.

each exposure is of approximately 1/3,000th second.

The camera will take a 100-ft. spool of film and is provided with two electric motors, one driving the film sprooket drum and prism; the other, the take-up spool. The speed is controlled by adjustment of the operating voltage. The running time at high speeds is very short; at 4,000 frames per second the film is used up in about 11/4 sec., but since it takes the camera 34 sec. to accelerate to the required speed, the actual filming time is only about 1/2 sec. (about 50 ft. of film). This means that if a single specific event is being photographed at high speed, it is necessary to have auxiliary equipment for initiating the event and starting the camera at the required instant. However, when a rapidly repeating operation is being filmed, it is possible to control the camera manually.

At speeds below 500 frames per second, it is possible to stop the camera during a run and get several shots on one reel; above this speed the reel must be allowed to run out completely and it is only possible to obtain one shot on the reel.

An important limitation is that the camera lenses have only a small acceptance angle, the 2-in, lens having a horizontal coverage of 11.4 deg., while the 6-in, lens covers an angle of 3.8 deg. The field of view is therefore strictly limited and mirrors must be used if simultaneous filming of widely separated objects is required.

When photographing at high speeds, lighting of intense brilliance is needed because each exposure is so short and difficulties can arise when attempting to cover a large area. For instance, in illuminating an area 3 ft. by 1 ft., 6 in. with tungsten lamps, the power consumption is about 24 kilowatts—over 100 amperes from an ordinary 230-volt supply. For small areas it is convenient to use a suitable number of 500-watt photospot lamps; four of these are usually sufficient to cover an area 12 by 6 inches.

In either case, the lamps are controlled by a series-parallel switching system to give a dim and a bright level of illumination. The lights are adjusted in the "dim" position and are pre-heated in this position before being switched to "bright" for the actual exposure. Pre-heating is necessary to prolong the life of the lamps; this is of the order of 6 hrs., running time at the "bright" level, but will be far less than this if there is no pre-heating.

Assessing illumination

An accurate assessment of the illumination is required, especially when using a reversal film. The technique in this case is to measure the illumination of the brightest highlight and adjust the camera aperture so that this highlight will appear clear on the film. The usual type of exposure meter, designed for use with ordinary cameras, has too large an acceptance angle; a better instrument is a photometer (such as the S. E. I.) giving an accurate measurement of illumination over an extremely small area. This instrument covers a range of intensities of a million to one; even so, the required illumination for high-speed cinematography often falls beyond the maximum range. The illumination is then usually calculated from measurements that have been made with the lamps running at a known fraction of their working brightness.

The running speed of the camera will depend upon the speed of the object being photographed and the use to which the film is to be put. If a frame-by-frame analysis is required, a higher filming speed will be needed than for a film to be used simply for projection. For films to be used for projection, a rough calculation of camera speed can be made if the time in which the action takes place and the required projection time are known. When a frame-by-frame analysis is intended, a more accurate calculation is necessary, since the movement of the image with respect to the film should not be more than 1/500th of an inch if a sharp picture is to be obtained. When the investigation concerns an erratically intermittent effect, two opposing factors have to be considered: The speed should be high enough to give a sharp image, but the length of run should be as long as possible to increase the chance of covering the event of interest. A compromise speed will usually be adopted in this case.

Typical problem

To illustrate how this technique is applied, we have chosen a problem which did not require the very high speeds of which the camera is capable, but in which the camera very greatly assisted in establishing just what was wrong when other methods had proved only partially successful.

The Distillers Co. (Biochemicals), Ltd., labels vast quantities of vials-small, round glass containers of 5- to 50-cc. capacity—and they have to do it quickly. Therein lay the problem, for the labeling machines were not giving the output that it seemed reasonable to expect, Periodically, labels were applied slightly askew for no apparent reason and hours of hit or miss machine adjustment were involved before full output could be restored. There appeared to be a critical speed for each machine. below the maximum figure claimed by the makers: when this speed was exceeded, jamming, often with vial breakage, occurred. There was no shortage of ideas as to why this was so, but its persistence clearly indicated that a solution had not yet been reached. There were three major possibilities:

1. That the machine design itself was at fault.

2. That the raw materials (i. e., adhesive, labels and vials) were at fault.

3. That the machine settings were at fault.

Since the performance varied so widely from day to day, very high outputs being occasionally obtained, it seemed likely that the makers' claims were reasonable. The question of machine setting was a tricky one and a great deal of time and effort had been applied. So much, however, depended on imagining what was taking place at speeds faster than the eye could follow that it is not surprising that opinions differed as to the optimum settings. The number of variables was quite large and one could go on "adjusting" for days without repeating a given combination. Obviously, what was needed was a clear picture of the behavior of the vial as it fell from the chute into the path of the rising quadrant to be swept in a curved path under the label drum. This mechanism is illustrated in Figures 1 and 2. Evidently some change in the pattern of behavior took place when the machine exceeded a certain speed and to ascertain the nature of this change the camera was brought into use.

Series of trials

The plan was to stage a series of trials using a gradually increasing machine speed and to study the reactions of chosen vials. One series of vials was made from glass tubing and therefore had low weight and exactly parallel sides. A second series was composed of vials carefully selected for their absence of the slight "belly" so common in this type of container. A third series contained molded vials in which the "belly" was quite pronounced. When a glass vial is taken from the mold it is still

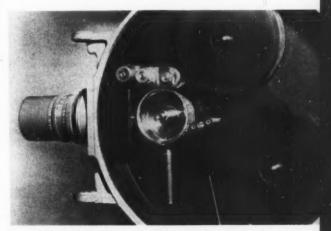


Figure 4. A close-up of the Fastax high-speed camera, capable of operating at 1,000 frames per second.

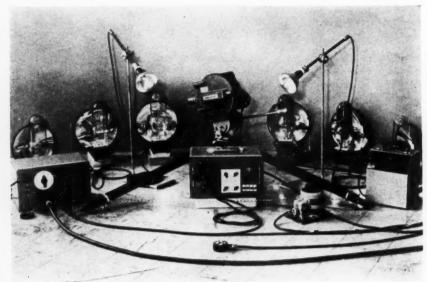


Figure 5. Lighting, triggering and speed-control equipment for the high-speed camera.

slightly plastic and in the first few seconds of standing upright it tends to spread slightly in the middle under is own weight. This distortion was felt at the time to be a most likely factor in the stability of the vial passing through the labeling machine, for it is logical to expect a tendency to spin about the expanded middle. Careful measurement of thousands of vial dimensions had, however, failed to confirm this view completely.

Primarily, the films would be required for projection to enable the actual operation to be viewed in slow motion and it was unlikely that a detailed analysis would be necessary. Some loss in sharp-

When the films were viewed (Figure 3), the first point which registered strikingly was the amount of free flight undergone by the vial. The vial momentarily rested on the face of the moving quadrant and then, as the quadrant passed on its downward flight, fell forward into the path of the returning arm. It could be clearly seen that it was here that the stage was set for later troubles. If the vial tilted in its fall, the advancing quadrant struck the base or the shoulder of the vial, causing it to spin as it entered the area under the label-bearing drum. The shape of the vial seemed to have little bearing on behavior at this stage and thus one ghost was laid straight away (though, of course, we had to bear

ness of the image could therefore be tolerated and it was decided that a camera speed of about 300

frames per second would be suitable. Twelve films were used and the whole operation was completed

in one day with the full cooperation of production

personnel, who rather welcomed this novel approach

to their long-standing problem.

in mind the limited number of vials photographed). Vials striking the face of the quadrant tended to bounce and their passage over the trailing edge was not controlled. At the higher speeds the vial had barely time to fall into the path of the rising quadrant and occasionally a vial struck the lip of the quadrant and was ejected out of the machine.

Figure 6. The high-speed camera in action at The Distillers Co. packaging plant.

Steps to correct

Now that a clear picture of the vial behavior had been obtained, steps could be taken to improve performance. The bouncing on the back of the quadrant could obviously be reduced by adjusting the vial feed so that the vials were close enough together to restrict their [Continued on page 302]

Stripping can coatings

An improved, faster method is suggested for removing organic finishes so that the weight of the tinplating itself may be determined. By Charles H. Coleman and John E. Despaul*

Package-testing laboratories are often called upon to determine the weight of timplate on finished cans after they have acquired other coatings. A large proportion of these cans are produced with one or more layers of lacquer, baked enamel, resin or other organic material over the tinplate. Cans are coated internally so that the tin will not affect the product packed, nor be affected by it. Exterior coatings help protect the can from corrosive effects of the elements, such as rain, sunshine, salt spray and temperature extremes (4, 5, 12)† and serve as military camouflage as well as a base for labeling or lithographing. In order to determine the weight of tinplate, it is necessary to remove the organic coatings. Removal of the coating must not affect the tin quantitatively and it should be accomplished rapidly in order to expedite an analysis of the tin.

Numerous trials with commercial coating removers (strippers) and common solvents proved that none met the requirements of a satisfactory stripper, Consequently, the experimental studies reported here were undertaken to develop a stripper which would have the desired characteristics.

Experimental

Numerous experiments were conducted with a wide variety of solvents and protective-coating removers in efforts to develop a preparation that would strip the organic coatings listed in Table II from tin cans efficiently. These coatings were supplied by can manufacturers in answer to a request for samples of coatings which they had found the most difficult to remove prior to analysis for tin. Procedures referenced in Table I were followed exactly. Where procedures are not referenced, specimens of coated tin were immersed in the stripping solution at room temperature for one hour. If there was no indication of coating removal after the sample was in contact with the reagent for one hour, experiments were discontinued. In some cases

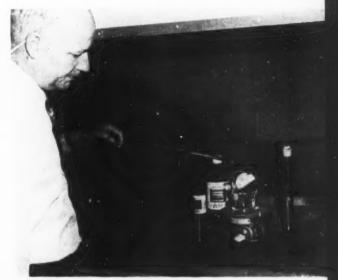


Figure 1. Minimum of apparatus is required for stripping coating from timplate samples by improved method. Here, Mr. Coleman places a coated sample disk in mixture prior to testing disk for weight of timplating. All of the stripping operations are conducted in a hood that exhausts fumes.

the stripping action amounted to no more than a slight discoloration of the reagent being tested. The abrasive stripper consisted of manual application of steel wool with scouring powder. The electric stripper (14) consisted of a 6-volt battery charger connected to a carbon rod which served as a positive electrode, while the sample itself served as a negative electrode. The electrodes were immersed in 5% NaCl solution which had been heated to 90 deg. C. and the current was turned on for stripping action.

In testing commercial strippers it was noted that several consisted partly of a coal-tar derivative. These strippers, although removing organic coalings slowly, left the tinplate unaffected. Consequently, the stripping characteristics of several coal-

^{*}The authors are with the Military Subsistence Testing Laborators, Military Subsistence Supply Agency, Chicago Administration Center, Chicago

^{*} Numbers in parentheses identify References appended.



Figure 2. Typical samples of cans that require removal of lithography or organic coatings prior to testing for weight of tinplate. New stripping mixture readily removes all types of coatings in a matter of minutes, without affecting the tin.

tar derivatives were considered for study. Tests with aniline showed that this organic base, when mixed with water, removed coatings much more effectively than any of the common reagents or strippers previously investigated. Therefore, experiments with aniline were conducted in efforts to improve its stripping properties. Dilute hydrochloric and acetic acids were supplemented to see if active hydrogen ions would help. Both acids increased the effectiveness of the stripper, but both attacked the tinplate, which made neither acid usable.

Accenting the action of the active hydrogen ions of aniline and its amino radical (11) was then tried. Ammonium hydroxide appeared to be very promising. A near-boiling mixture of aniline and ammonium hydroxide proved exceptionally effective. Experiments aimed at still better results were undertaken by supplementing the ammonia-aniline combination with the solvents, surfactants and emulsifiers shown in Table I. In all cases these decreased the effectiveness of aniline and ammonia. Consequently, all adjuncts except ammonia were omitted and the optimum mixture of 10 ml, aniline to 100 ml. 12% ammonium hydroxide was developed as the desired stripper and signified by the initials, MSTL, of this laboratory.

Loss of tinplate due to MSTL stripper action was determined on samples of tinned-base sheet steel which had no organic coating over the tinplate. Two sets of uncoated samples were used. Each sample consisted of six disks having an area of 4 sq. in, on each side. This totaled 48 sq. in, of surface exposed to the action of the stripper. The disks were placed

Table 1: Comparative effectiveness of various strippers in removing organic coatings from tin cans

Very slow:	Moderate:	
Ammonia (10)	Acetone (10)	
Aniline (10)	Amyl acctate (10)	
Ether (10)	Aniline plus water	
Ethylene glycol (2)	and acetone	
Grease (10)	Aniline plus water	
Isopropyl alcohol (2)	and alcohol	
Linseed oil (10)	Aniline plus water	
Mineral oil (10)	and Dreft	
	Aniline plus water	
	and Span-60	
	Aniline plus water	
	and Tween 60	
	Butyl acetate (2)	
Slow:	Methylethyl ketone (2)	
	Toluene (2)	
Alcohol	Turpentine (10)	
Baked-enamel paint remover (17)	Xylol (2)	
Benzene (10)	Rapid:	
Carbon disulfide (10)		
Carbon tetra- chloride (10)	Aniline plus water	
Chloroform (10)	Very rapid:	
Enamel stripper (18) Furfural alcohol (2)	MSTL stripper	
Methyl alcohol (10) Naphtha (10)	Attacks metal:	
Nitrobenzene (10)	Abrasive stripper	
Oleic acid (2)	Alkali-based strippers (2	
Paint-brush	8, 9, 10, 15)	
cleaner (7)	Aniline plus acetic acid	
Paint removers (2, 8	Aniline plus hydro-	
9, 10, 15, 16)	chloric acid	
S-18 (13)	Burn off (10)	
Sweet oil (10)	Electric stripper (14)	

NOTE: Numbers in parentheses identify References appended.

in 110 ml. of cold stripper, brought to a boil and maintained at the boiling point for five minutes. After removal of the disks the stripper was tested for the presence of tin, using the lower limits of sensitivity of standard spot tests (6) as the criterion.

Tests were set up comparing the time to remove organic coatings by the above procedure against recommended procedures using commercial strippers (Table II). A limit of 15 min, was set on the allowable test time, since it had been found that MSTL stripper was able to remove any can coating so far encountered within a few minutes.

Procedure

The MSTL stripper, which is conveniently prepared by adding 10 ml, aniline to 100 ml, 12% ammonium hydroxide in a 400 ml, beaker, is maintained near boiling on a hotplate in a fume hood. The specimen to be stripped is immersed in the hot mixture. It is allowed to remain in the mixture until the coating loosens. The specimen is then removed, rinsed in cold water and examined. If the coating is not entirely detached, it is rubbed off gently with a rubber spatula under a stream of cold water. If necessary, the sample is treated further with the stripper and rinsed again.

Results

Comparative action of common procedures used in removing oleoresinous, epon, phenolic and butoxy coatings from food cans is summarized in Tables I and II. Table I shows that the action of most strippers either required too much time to remove the coating or affected the tinplate. Table II shows the relative time required for MSTL stripper and the most reactive of the commercial strippers (13, 16, 17, 18) to remove the most tenacious organic coatings obtainable.

Some of the commercial strippers showed no indication of coating removal during the 15 min. of the comparative tests; hence they were listed nil, although the longer period of an hour during preliminary testing had indicated that they did have some stripping action. Heating the "heat-reactive phenolic" coating in a steam chamber for 15 min, at 124 deg. C. had no apparent effect on the time required for coating removal. No tin was detected in the stripping solution after the uncoated test specimens had been heated at boiling temperature in MSTL stripper for a period of 5 minutes.

Discussion

Visual examination of disks after removal of the protective coating and chemical analysis of the stripper solution showed negligible loss of tin due to MSTL stripper action. In order to ascertain further that no tin was lost, samples were subjected to extremes of operating conditions, Since test samples normally are removed from the stripping mixture within a few seconds after the coating is loosened, 5 min, of boiling of uncoated tin was considered a sufficient extreme to test for loss of tin. A spot test with a limit of identification of 0.2 gamma of tin was negative, indicating that loss was too slight to be detected by the macro method of analysis (1). It was therefore concluded that tin loss is insignificant compared with usual requirements of 0.25 to 1.50 lbs, of tin (3) per base box.

Of the coatings supplied by the two manufacturers, a phenolic type proved to be extremely difficult to remove. Some commercial strippers had no appreciable effect on this phenolic coating during 1 hr. of stripping trial, after which the test was discontinued. One of the commercial strippers worked effectively when used full strength rather than in the dilution recommended by the supplier. However, MSTL stripper readily removed the phenolic coating within 5 min, of treatment.

Experiences with MSTL stripper over the course of a year have shown that many single-layered coatings are removed and float free from the metal within a few seconds to 1 min. of treatment. Multi-layered and very adherent coatings are released within 1 to 5 minutes. Coatings which cannot be removed with any other strippers are removed with MSTL stripper usually within 5 minutes.

A particularly difficult coating was encountered on some German ration cans which remained unscathed with every stripper tried excepting the MSTL stripper. Even heating at 550 deg. C. in an electric furnace had little effect on the coating. MSTL stripper loosened the can coating within a matter of only 5 min., so that it could be readily removed with the aid of a rubber spatula.

Summary

Tinned cans are coated with lacquer, enamel or other material to protect the underlying metal, to serve as military camouflage or for lithographic purposes. This coating must be removed prior to determining the weight of tinplate. Commonly available organic solvents, popular formulas, recommended commercial coating removers, an abrasive technique and an electromotive method proved unsuitable for removing the coatings encountered. In each case [Continued on page 301]

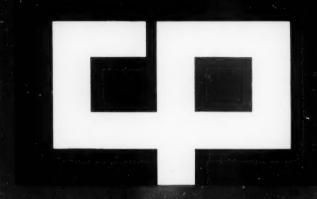
Table 11: Time required for removing tenacious organic coatings from tin cans, comparing MSTL stripper with recommended commercial strippers

	Stripping action in seconds	
	MSTL	Commercial
Type of coating	stripper	strippers*
Company A:		
Oleoresinous	15	285
Epon	90	Nil
Phenolic	300	Nil
Company B:		
Oleoresinous	12	240
Oleoresinous, ZnO pigmented	15	45
Butoxy	45	Nil
Epon	90	Nil
Phenolic, heat		
reactive	240	Nil
Phenolic, heat re-		
active, treated	240	Nil

^{*}The most reactive of the commercial strippers studied (13, 16, 17, 18).

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Improved closure of flexible barriers

Rounded-jaw heat sealer is found to give seal efficiency of 80% or better, in comparison with 50% or less for the standard flat-jaw sealer. By Howard W. Christie*

The objective of this program? has been the development of new and improved methods for sealing packages made of flexible barrier materials. These packages will be used for storage of dehydrated foods over long periods of time. The packages must have a negligible vapor transmission rate and they must retain their physical integrity under the very wide range of different storage conditions that can be encountered in military operations.

One of the weakest points of such packages has been the seal. The tensile strength of the seal is usually less than 50% of that of the packaging material. For example, a barrier material consisting of a laminate made from 0.0005-in, polyester, 0.001-in, aluminum foil and 0.002-in, polyethylene will have a tensile strength in the range of 18 to 20 lb./in, Heat seals made with commercial sealers on such a material will have tensile strengths in the range of 7 to 10 lb./in. The efficiency which has been attained with such seals is less than 50%.

Heat sealing

Background. There are no generally accepted standards of strength for heat seals in barrier packaging materials. The Armed Services have required the packaging-material supplier to provide the necessary information on optimum sealing conditions (temperature, pressure and dwell time) with each type of barrier material. No definite seal strengths are required. The optimum obtainable with existing sealing equipment has been considered satisfactory.

The sealing of barrier packaging materials is usually accomplished by fusion or heat sealing of the inner thermoplastic layer. The great majority of such sealing has been done by pressing the two layers between heated platens (jaws) until the plastic layers have fused. The methods of heat application include heated jaws, dielectric heating and impulse heating. In general, the jaws used have been

essentially flat. Many types of jaw-surface serrations have also been used. Many mechanical modifications of the basic reciprocating heat sealer have been made to improve speed and continuity of sealing. Rotary and continuous belt-type sealers are also used in industrial packaging operations.

Evaluation of sealing conditions. A special laboratory heat sealer, designed by the Institute to provide precision control over sealing variables, was used to study the effects of varying sealing conditions (dwell time, jaw temperature and pressure)



Figure 1. Photomicrograph of flat-jaw seal.



Figure 2. Photomicrograph of round-jaw scal.

[•] Midwest Research Institute, Kanses City, Mo.
† The work outlined was carried out at Midwest Research Institute under Container Div., Quartermaster Food & Container Institute for the Armed Forces, served as project monitors for this program. The paper was originally presented before the Research & Development Associates, Food & Container Institute's Sept. 20, 1960, meeting at Chicago.

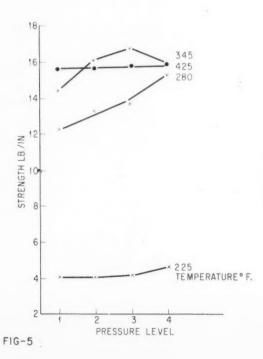


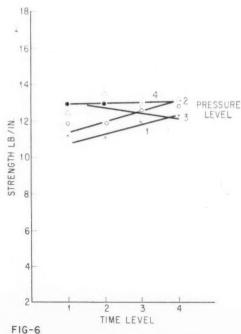
Figure 3. Curved-jaw heat sealer and control, as used at the Midwest Research Institute.

on seal strength. Several types of barrier packaging materials were investigated. It is not the purpose of this paper to present in detail the results of these experiments; only the important conclusions are presented. The strengths of the seals produced by this equipment were measured on a Model L-3 Scott tensile testing machine which had been modified in a manner to increase the sensitivity tenfold,

The determination of the effects of sealing conditions on seal strength involved correlation of these conditions with seal strength. Statistical experimental design and correlation were applied to this investigation. Analysis of the strengths of the seals made over a wide range of sealing conditions on a 0.001-in. polyvinyl chloride/0.0005-in. aluminum foil/0.0005-in, polyester laminate (tensile strength of 14.6 lb./in.) indicated that at some highly critical point stronger seals could be made. During this experiment it was observed that highstrength seals occurred, but they could not be reproduced. When a second-order polynomial was fitted to the data it was found that several critical regions existed and the degree of fit was small. The only way that these discrepancies could be explained was that some process other than the effects of the three factors of dwell time, temperature and pressure were affecting the seal strength.

The round-jaw sealer. Seal specimens that were above average strength were examined under a microscope. Those seals showed evidence of some flow of the thermoplastic layer during sealing. A nonlinear alignment along the jaw faces may have caused high pressure points. The high pressure points may have caused the flow. This examination led to the idea of deliberately causing the thermoplastic layer to flow into a fillet. A fillet at the seal line should spread the applied loads over a larger





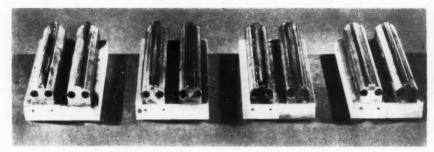


Figure 4. One-piece curved sealer jaws, experimental.

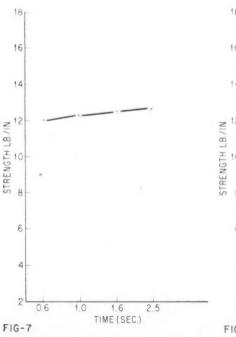
area and thus result in producing a stronger seal.

The photomicrograph (Figure 1) of a flat-jaw seal shows clearly the "notch" existing at the junction between the two thermoplastic layers. When a load is applied to the seal, the "notch" acts as a stress concentration point. Tearing of the thermoplastic layer and failure of the seal occur at this point at loads much lower than the tensile strength of the laminate. Elimination of this "notch" should greatly increase the strength of the seal.

The simplest method of producing a "fillet" to fill this notch is to change the flat jaw to a rounded or curved surface. The high pressure created at the contact line of a round-jaw sealer should force the thermoplastic layer to flow. The jaw curvature will determine the shape of the fillet thus produced. The idea of making the thermoplastic layer flow was given a cursory examination on a crude rounded-jaw sealer consisting of one 0.75-in, diameter half-rounded aluminum rod attached to one jaw of the flat-jaw sealer. The results were very encouraging. Seal efficiencies of 80% or better were readily obtained on a number of different types of laminated packaging materials.

· Figure 2 shows the change in seal configuration produced by the round jaw, The thermoplastic, in this case polyethylene, has been forced into the fillet shape at the junction and the "notch" is almost completely eliminated. This seal had a tensile strength of 12.8 lb./in, for an efficiency of 75%,

High-pressure round-jaw heat sealer. A prototype round-jaw sealer was constructed (Figure 3). This



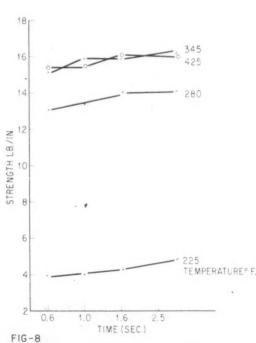


Table 1: Tensile strengths of laminates

Laminate description 0.0005-in. polyester/0.001-in. aluminum foil/0.001-in. polyethylene 0.0005-in. polyester/0.001-in. aluminum foil/0.0015 in. polyethylene	Tensile strengths (lb./in.)			
	Machine direction	Transverse direction		
aluminum foil/0.001-in.	18.5	18.3		
aluminum foil/0.0015 in.	19.3	19.2		
0.0005-in, polyester/0.001-in, aluminum foil/0.001-in, polyvinyl chloride	19.5	19.5		
0.0005-in. polyester/0.001-in. aluminum foil/0.0015 in. polyvinyl chloride	19.7	19.3		

unit is capable of applying higher pressures on the seal than are usually encountered. The round-jaw configuration applies a very high pressure on the seal. This high pressure causes the plastic to flow into the desired fillet shape. The sealing jaws are illustrated in Figure 4.

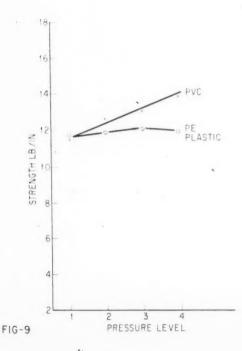
This sealing unit is capable of developing sealing pressures from about 50 lb./in. to 500 lb./in. of seal length. The jaws are 8 in. long. The actual sealing pressure in terms of pounds per square inch is much higher, being in the order of several thou-

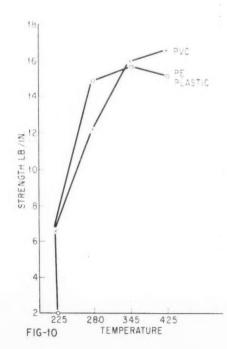
sand pounds per square inch. For reasons of simplicity in reporting, the sealing pressures are given in terms of pounds per inch.

Statistical optimization and description of curvedjaw sealer performance. Optimization of the curvedjaw sealer configuration was performed by studying the effects of sealing conditions and jaw radius of curvature on seal strength, Four different barrier laminates were used. Their strength, properties and description are given in Table I.

Previous work had indicated that several variables were important and interacted with one another. It was also certain that some variables would go through a maximum. Due to these interactions and the maximums, it was necessary to use a factorial design with several levels. The design selected was a $\frac{1}{16}$ replicate of a 2^44^4 factorial in two blocks of 128 different combinations of sealing conditions. The variables studied and their levels are tabulated in data presented in Table II.

The orientation variable was introduced to balance out possible material gradients if it became desirable to study jaw-position effects. The pressure was limited to the 94.3- to 471.3-lb. in, range by the mechanics of the system. The decision to skew the pressures was based upon the tendency of the small-radius jaw to "cut" the material. Even with this degree of skewness, the pressures exerted by the small jaw are probably considerably greater





than those for the large jaw. The experiment required that each set of jaws be removed once and remounted, to "wash out" alignment effects.

A statistical analysis was performed on the data and the 95% confidence limits of a seal (nine specimens) was 2.82 lb./in. Thus, the second-order surface appeared adequate. The significant effects and the main conclusions of the analysis were as follows (see Figures 5-14):

1. Over-all, polyvinyl chloride specimens averaged 0.84 lb./in. higher than polyethylene specimens (Figure 5). In addition, plastic type interacted with temperature (Figure 6) and pressure. A temperature of approximately 345 deg. F. is optimum for polyethylene, while higher temperatures are required for polyvinyl chloride. Pressure has little effect with polyethylene, while higher pressures are required by polyvinyl chloride.

2. The 0.0015-in, material averaged 0.78 lb./in. higher than the 0.001-in. material. Thickness interacted with temperature. Little difference was observed at the two lower temperatures, but almost 2 lbs. difference occurred at the higher temperature

(see data in Figure 7).

3. Increasing pressure increased the seal strength (Figure 8). In addition to the interaction with plastic, interactions with time and temperature also exist (Figures 9, 10). Pressure, it appears, becomes less important at higher temperatures and longer times,

4. Longer times appear desirable (Figure 11). Time interacted with temperature, with time being less important at higher temperatures (Figure 12).

5. Curvature was significant, with the smallest radius giving higher strengths (Figure 13). This may only reflect pressure differences. However, radius interacts with temperature (Figure 14) and is almost entirely due to the behavior at the maximum temperature. At this temperature strength decreases with radius. No great effect is observed at the other temperature ranges,

6. Temperature was found to be the most important variable (see data in Figure 6).

It must be pointed out [Continued on page 220]

Table II: Experiment variables

Variable	Le	vels			
Plastic type	Polye	thylene	, poly	vinyl	chloride
Plastic thickness (in.)	0.001, 0.0015				
Seal direction	Mach	ine, tra	insvers	6	
Orientation (web side)**	Left.	right			
Seal temperature (° F.)	225,	280,	345,	425	
Sealing time (sec.)	0.6,	1.0,	1.6.	2.5	
Seal radius (in.)	0.25,	0.50,	1.00,	2.0	0
Pressure (lb./in.)					
with 0.25-in. radius	94.3	127.3	174	8.	235.6
0.50-in. radiu-	117.8	160.2	216	.8	296.9
1.00-in, radius	150.8	202.6	278	.1	372.3
2 00-in, radius	188.5	254.5	348	.7	471.3

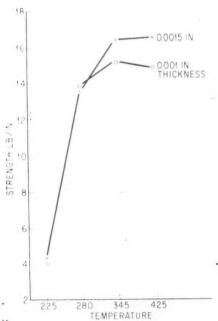


FIG-11

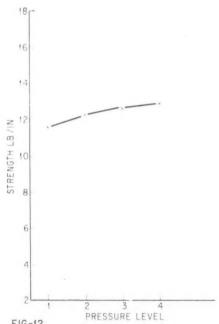


FIG-12

Do you know why the



Now in glass, these fine products used to come in other types of containers

This is the message we told to 47,747 home economists in the December issue of WHAT'S NEW IN HOME ECONOMICS

proudest products switch to glass?

Glimpses into the past, present and future of glass packaging



How food preservation was discovered. Back in 1795 France was at war at home and abroad. But her deadliest foe was not a human enemy—it was scurvy. Spoiled salt meat and bread were soldiers and sailors. In fact, the situation was so serious that a

12,000-franc prize was offered to the citizen who could invent a method of keeping foods fresh.

An unknown confectioner named Nicholas Appert decided to tackle the problem. He experimented 15 years before he hit on the idea that foods would keep indefinitely if they were heated and sealed in airtight containers. Filling glass jars with fruits and vegetables, he sealed them with corks and cooked them in boiling water. His theory worked—and Appert was a hero! For discovering the principle of food preservation he was awarded the prize by Emperor Napoleon Bonaparte himself!

Bottles yesterday and today. At the time Appert was making his revolutionary discovery, the only containers available for his experiments were made of glass. These were handblown by a method over 2,000 years old and they were heavy, fragile and

costly. A far cry from the jars and bottles we know today.

Even as short a time ago as 1935, bottles weighed almost twice as much as they do now—and it's predicted they'll shed another 20% in the near future! Amazing, when you consider that while glass containers have been slimming down in weight, they've been gaining in strength! If you've always thought of glass as fragile, you'll be surprised to learn that damage to glass in shipping is less than a quarter what it is with other types of containers. The reason, of



course, is that glass is rigid and strong . . . won't dent, mar or deteriorate . . . and is only affected by impact so severe it shatters the container.

Closures from corks to caps. Appert knew of only one way to seal his bottles. This was to cut corks by hand—then bind them to the container with wire to keep them in place. Today, of course, some bottles are still corked. But the overwhelming majority have closures of infinite variety to meet special needs.

However, *all* have to meet two contradictory requirements. The seal must be so positive that nothing can enter or escape. Yet the user must be able to break the seal quickly and easily—and in some cases be able to reclose and open

the container many times. 9 basic kinds of closures have been devised to fill these requirements.

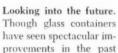


The reason more and more fine products are coming to you in glass. Many foods that used to come in other types of containers are now being switched to glass. People like to see what they are buying. They like, too, the con-

venience of being able to reseal and store leftovers knowing they will be kept pure and safe.

Today all of these fine foods are newly displaying their colorful personalities and guarding their piquancy in glass!
(1) peas, (2) orange drink, (3) fruit salad, (4) nuts, (5) spices, (6) heets, (7) minced onions, (8) tomato juice, (9) mushrooms, (10) instant coffee, (11) cooking oil, (12) asparagus, (13) ground coffee, (14) whole onions, (15) ravioli, (16) whole carrots, (17)

pickled onion slices, (18) fortified food supplement, (19) citrus sections, (20) dessert toppings, (21) minted pears, (22) baby food, (23) green beans, (24) syrup, (25) sour cream, (26) pimientos, (27) hard candy, (28) boned chicken, (29) wax beans, (30) apple rings, (31) apple sauce, (32) instant tea.





few years—that is just the beginning. Right now many exciting experiments are on the fire! Before long, containers will be even stronger and lighter. Much thought, too, is being given to attractive styling. No other package material offers more design possibilities than glass. Demand for convenience is bringing new dispensing fitments and a new world of pressure-packed foods in glass. You'll be seeing many fascinating innovations in glass—and you can be sure that a large share will bear the ① symbol of Owens-Illinois.

DURAGLAS CONTAINERS
AN (1) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES - TOLEDO 1, OHIO
ENGRE CONTRIBADITABLES - NA PRANCISCO

Table III: Test data from seals made using optimum conditions

Strength (lb./in.)										
Run No.:	1	2	3	4	5	6	7	8		
	19.7 *	19.2	19.4	15.9	18.7	19.0	18.4	18.7 *		
	19.4	18.7	18.7	18.0	15.0	19.0	19.0	14.7		
	19.5 •	19.2	19.0	18.4	18.7	18.7	19.4 *	19.0		
	20.0 *	18.7	19.7 *	15.0	19.0	18.4	18.4	18.4		
	20.4 *	19.2	19.0	18.7	18.4	18.4	19,4	18.5		
	20.4 *	19.0	19.4 *	16.4	18.4	19.0 *	18.9	18.8 *		
	20.0 *	19.7 *	19.7 *	17.4	16.7	19.2 *	17.0	18.4		
	19.7	19.7 *	19.0	16.0	19.4	19.2 *	19.0	19.0 *		
	19.4 .	19.2	19.7	16.7	18.4	18.4	16.7	18.0		
	19.2 *	19.4	17.7	19.2 *	18.4	18.5	18.7 *	18.2		
Avg.:	19.8	19.2	19.1	17.2	18.1	18.8	18.5	18.2		
Std. dev.:	0.41	0.34	0.62	1.38	1.37	0.34	0.93	1.27		

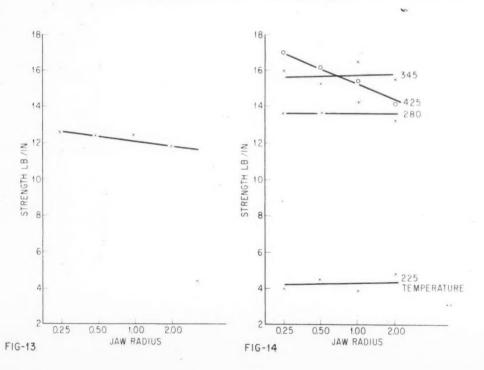
*These specimens broke outside of the seal area.

[Continued from page 217] that the data shown in Figures 5-14 are average effects. Strength figures are averages of all seals made at the particular time, temperature, pressure or jaw radius studied and should not be confused with optimum strengths.

Performance at optimum sealing conditions. An example of the performance of the round-jaw sealer is given in Table III. Seals were made on the 0.0005-in. polyester/0.001-in. aluminum foil/0.0015-in. polyvinyl chloride laminate. The sealing conditions were 390 deg. F. jaw temperature, 1.25-sec.

dwell time, 188 lb./in. force on jaws and a jaw radius of 0.25 in. Eight seal specimens, 8 in. long. were made and cut into 0.75-in, tensile test specimens for strength determination on the Scott tester,

The average strength of these seals was 18.6 lb./in, for an efficiency of 94.5%. The standard deviation in strength for these seals was 1.11 lb./in. These figures include the normal variability in material strength and are lower than the true seal strength. Nature of the test precludes determining seal strength greater than the laminate material.



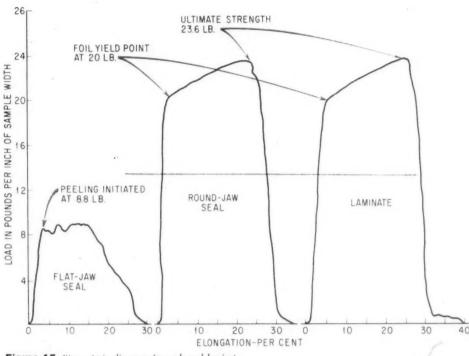


Figure 15. Stress-strain diagrams for seals and laminate.

In the three stress-strain diagrams shown in Figure 15, the difference in the two types of seals is readily apparent. The laminate was 0.001-in, polyester/0.001-in, aluminum foil/0.002-in, polyvinyl chloride, with an ultimate tensile strength of 23.6 lb./in. It is interesting to note that the ultimate usable strength of this laminate is 20 lb./in. Failure of the aluminum-foil layer occurred at that load. After the foil has failed, the laminate loses much of its protective properties. Thus, the round-jaw sealer has produced a perfect seal on strong, lightweight, gas-impermeable, flexible packaging materials.

Conclusions and recommendations

Listed below are the general conclusions on sealer performance and recommendations for the design and fabrication of the sealer.

General conclusions. (1) The round-jaw sealer is a simple method for obtaining highly efficient seals on laminated barrier packaging materials. This sealer has the distinct advantage over the flat-jaw sealer both in strength of seals obtained and in the amount of material consumed in making the seal. (2) The sealing conditions required to produce optimum seals are somewhat more critical than those of the flat-jaw sealer, but are completely within the capability of existing controls. (3) The

optimum conditions required for sealing will depend upon the type of laminate used. These conditions can be simply determined by trial and error, or by application of statistical experiment design.

Design recommendations, (1) Temperature control reliable to ±2 deg. F. should be provided at the jaw heater blocks. (2) Pressures in the range of 10 to 250 lb./in, should be obtainable by simple air-pressure regulation. (3) Jaws should be in the range of 0.25- to 0.50-in, radius of curvature. (4) The frame and supports to which load is applied during jaw closure should be sufficiently rigid to prevent deflection and resultant misalignment of the jaw. (5) The jaws must be kept parallel. Maximum attention should be given to jaw alignment of the sealer and the jaw surfaces should be held to within ±0.001 in, along their length.

Acknowledgement

The author wishes to acknowledge the many contributions to this program made by Mr. Calvin C. Bolze, Mr. Thomas M. Medved and Mr. Donald H. Gaddis, Mr. Bolze was responsible for the statistical-experiment design and analysis of data, Mr. Medved carried out much of the data collection that formed the basis of this paper. Mr. Gaddis is responsible for the design of the heat sealers discussed.

Questions & Answers

This consultation service on both technical and engineering subjects is available at your command. Simply address your questions to the Technical Department, Modern Packaging, 770 Lexington Ave., New York 21. Your name or other identification will not appear with any published answer.

Automation for set-up boxes

Q: We employ a variety of set-up boxes in our packaging operation and—like most packagers—would like to reduce the amount of hand labor involved in handling our containers in all stages of manufacture and packaging. Has anyone developed any automatic set-up-box equipment that could help us?

A: Considering the relatively small size of this segment of the over-all packaging industry, a surprisingly large amount of automatic equipment is available both for manufacturing the boxes and for handling them on the packaging line.

Starting with construction, there are very good machines that combine both the staying and wrapping operations, and recently a new machine was put into operation that can automatically produce extensionedge set-up boxes, if this type of box is of interest to you.

In handling, there are now commercial machines to remove the lids and to replace them after the product has been filled. We do not know of any automatic fillers, but these would vary radically, depending on the product, and you could probably devise a simple machine attachment yourself to handle this operation.

Foam plastics laminations

Q: With the current interest in foamed-polystyrene sheet materials, we cannot understand why there has been no attempt to laminate these sheets to paper and paperboard. Can you tell us whether there has been experimental work in this area and also why these materials have not appeared commercially?

A: To correct your first statement, there certainly are foam-paper laminations in commercial use. A combination of pre-expanded polystyrene foam and paper has been used for several years in insulated and water-resistant shipping containers. And a manufacturer of paper cups has recently marketed a disposable drinking container made from a lamina-

tion of paper with expandable polystyrene-sheet material.

In addition, there are at least-two other suppliers who offer laminations of expandable polystyrene-foam sheet and film not only to paper and paperboard, but to bioriented polystyrene sheets and other materials, too. One such foam-paperboard combination has been used commercially in a gift liquor carton. These laminations are available now in at least test quantities and probably could be quickly supplied in commercial quantities if the volume of application warrants the effort.

The question of why they have not been used more extensively in packaging is mostly a matter of the material price, when related to the amount of protection or the appearance provided by the lamination, and the cost of laminating the materials and fabricating them into a finished package. However, v ork is being done to smooth out techniques of manufacturing to reduce the ultimate cost of such packages.

Polystyrene aerosols

Q: Are polystyrene aerosols available, or is any work being done to create such a package?

A: Recent decreases in the price of this resin have created active interest in polystyrene aerosols and many of the problems of forming such a container have now been worked out as a result of new advances in molding. Therefore, we expect soon to see this plastic used in aerosols, as have such other plastics as nylon, polypropylene and acetal resin.

As you no doubt know, polystyrene is beginning to be used in non-pressurized bottles for many types of products. One recent application for toiletries involves a blow-molded bottle that marks a breakthrough in utilizing this forming technique with polystyrene. In another application for a condiment, a two-piece polystyrene bottle has been made by injection molding, with the pieces joined together by an adhesive.

Scuff-resistant labels

Q: We have a problem of scuffing of our printed paper labels. These labels are applied to fibre cans carrying small metal parts. We find that the labels are rubbed in shipment and this detracts from their appearance and identification. We would like to spray these applied labels with a plastic coating to prevent this scuffing action. Can you suggest a possible treating process and plastic coating for this purpose?

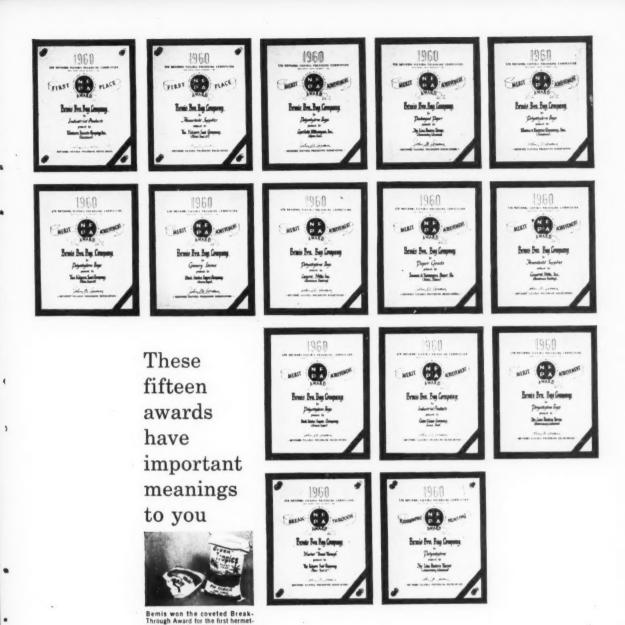
A: There are many types of coatings that will give good scuff resistance and an improved appearence to printed paper labels. Such coatings or laminations are widely used and can be purchased from the label maker. It is recommended that you purchase labels that have been coated by the label maker rather than attempt yourself to apply them on the label before or after they have been put on the package.

A spray coating will require solvents and a drying system. This is a complex and costly operation. Also, this operation will require careful control to result in a label with good appearance and uniform coating.

Your label supplier can offer you a number of different coatings that you can test for their durability on your package and under the shipping and handling conditions to which your package is subjected.

For maximum durability, a plasticfilm lamination can be used. There is a wide range in the cost of treated labels, since they may range from thin coatings of some type to the film laminations. Your supplier can also assist you in the choice of the proper adhesive and paper stock to be used, since these factors must be considered if any coating is applied to the label's outer surface. For some coatings it may also be necessary to change the printing inks.

The best answer to your problem is to use pre-coated labels selected after a shipping test rather than to attempt to apply the scuff-resistant coatings in your own plant.



In the recent National Flexible Packaging Association Competition, Bemis Plastic Packages won more awards than those of any other company. Bemis entered twelve packages. Eight of them won a total of fifteen awards. And the competition included cellophane, foil, waxed sheet, paper, miscellaneous film and laminated and extrusion coated sheet converters. As you will note, the awards emphasize a variety of merchandising and packaging values.

To YOU this means... You have a convenient, creative packaging source that has proved its ability to make plastic packages for a wide, wide range of products... packages with unique protective qualities. Your Bemis-printed package will pack a powerful merchandising punch. The Bemis talent responsible for these award winners will work with you on your packaging job, too. Just write or phone us.

BEMIS BRO. BAG CO., 408 Pine Street, Box 49, St. Louis 2, Phone: CHestnut 1-0900

ically sealed drawcord polyethylene bag...the Re-Clos-it Bag. The consumer slits the gusseted top to open the package...then recloses it with the drawcord.





Your Anchor Man brings you **SPECIALIZATION** in glass packaging

Your Anchor Man knows glass packaging. He brings you all the benefits of Anchor Hocking's half-century of specialization in glass packaging. And he is supported in depth by experienced research, engineering, quality control and service technicians.

To most completely meet your diverse needs, your Anchor Man offers you an extensive line of Anchorglass containers -in crystal, amber, emerald green, georgia green-in all standard styles, sizes and finishes. He also supplies an equally complete line of Anchor twist, lug, screw or friction-applied metal caps and machines to apply them at speeds ranging from 30 to 1,000 per minute. In addition, he offers you molded closures in a variety of attractive designs and colors. And, to keep your production lines running smoothly and efficiently, you can always count on prompt, personalized service. Anchor Hocking Glass Corporation, Lancaster, Ohio.



Specialists In Glass Sales-packages

elants & people

Heekin Can Co., Cincinnati, enters the plastics field with the purchase of the West Pittsburgh (Pa.) injection-molding facilities of American Can Co., New York. The newly acquired plastics operation will be known as the Pittsburgh Plastics Div., and will be under the direction of Arthur S. Jacobs, who also becomes a v.p. of Heekin. The new div. will specialize in plastics injection molding, making closures, containers and specialty items for packaging use.



American Can Co., New York, is establishing a new major product div. with responsibility for production and sales of paperboard milk containers. Neil Kingsnorth, who has been v.p. in charge of manufacturing of Dixie Cup Div., will become v.p. and gen. mgr. of

the new Milk Container Div., headquartered in New York. Organization of the new div. coincides with American Can's introduction of a polyethylene-coated 1/2-gal. rectangular paperboard milk container.

P. W. Wood, formerly regional mgr., Midwestern sales region, Union Carbide Plastics Co., New York, has been named product mgr. for polyethylene. He will be located in Union Carbide Plastic's New York general sales office. Howard L. Burpo, Jr., succeeds Mr. Wood. Mr. Burpo will direct Midwest sales of Bakelite brand polyethylene, styrene, vinyl, phenolic, and epoxy resins and compounds.

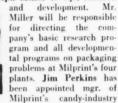
Three new appointments have been made in the Corrugated Container Div. of Continental Can Co., New York. F. E. Goodrich has become sales mgr. for new products development and will be located in Chicago, C. H. Root is now director of corrugated box research and development in Van Wert, O. J. R.

New address for MODERN PACKAGING

Headquarters of Modern Pack-AGING are now located in greatly expanded offices occupying two floors of the new building at 770 Lexington Ave., New York 21, corner of 60th St. Visitors are welcomed there, to use the facilities of Reader Service and the extensive reference library on packaging and plastics. Telephone and teletype numbers remain the same. Further details will be given later.

Bevers has become sales mgr. for corrugated displays, with headquarters in New York.

Milprint, Inc., Milwaukee, has promoted Adolph Miller to v.p., research



div. He will control directsales activities, sales-promotion plans and technical developments related to candy-packaging sales. Louis Giuntoli has been named Midwest district sales mgr. for Packaging Materials Service, a Milprint sub. which produces printed packaging for supermarkets. Walter S. Thompson, asst. to v.p. of plant operations, has retired.

Edward Ruggles has joined American Viscose Corp., Philadelphia, as mktg. mgr. of Avisco's film div. He will coordinate market development, technical sales and all sales-promotion activities. Mr. Ruggles has been advtg. & mdsg. mgr. of Nashua Corp., Nashua, N.H.

Riegel Paper Corp., New York, has formed a product-development group for folding cartons and a New York sales management group for these items. Karl Schantz has been named product mgr. Dennis Gorski is art director, John Weeks is sales mgr. for dairy, egg and iobbing items, and Edsel Reed is sales mgr. for meat and dry cartons. They will report to Jack Hutchinson, mgr. of folding-carton sales.

Benjamin Lechner has resigned as pres. of the Print-a-Tube Div. of the Lassiter Corp. and Riegel Paper Corp. He will now devote his full time to operations of Lechner Pulp & Paper Corp., a representative for European paper mills. Mr. Lechner was instrumental in the development of extrusion coatings for many packaging films.

A separate dept. of packaging and labeling has been established by Stauffor Chemical Co., New York. The new dept. will conduct studies to insure that all packages for industrial and agricultural chemicals are the most practical and economical available within the requirements of safety and Government regulations, says the company. In addition, the dept. will make recommendations pertaining to standardization, coordination of purchasing and improvements for packaging, package-handling and storage procedures. Along with coordination of label designs and colors,

the dept, will be responsible for conformity of all labels to requirements of Federal, state and other regulatory agencies. James H. Begley has been named director of the dept. George Cameron is mgr. of packages and containers, Henry Moras is national mgr. of labeling, and Donald Smoot has charge of labeling in the Eastern U. S.

A number of executive promotions have been made by R.C Can Co., St. Louis. They include: W. L. Rutkowski: to board chairman, W. F. J. Fienup: to pres., W. G. Fienup: to exec. v.p., G. D. Flotron: to first v.p., H. J. Schmidt: to v.p. sales, and W. L. Geist: to v.p. research & development.



James M. Jordan becomes mgr. of plastics mkt. research in the commercial development dept. of Spencer Chemical Co., Kansas City, Mo. Mr. Jordan, who has been senior mkt. analyst, succeeds Jack Craig, who has resigned. L. E. Stollenwerck, form-

erly mgr. of public relations, has been named director of public relations following the resignation of Max W. Foresman.

St. Regis Paper Co., New York, has begun the construction of a technical center for the development of new uses and markets for paper. It is being built on a 60-acre site at Clarkstown, N. Y., and is scheduled for completion this autumn, says the company.

The Board of Directors of KVP Sutherland Paper Co., Kalamazoo, Mich., has announced three top appointments. E. Norval Hunter, former first v.p., was named senior exec. v.p. He is in charge of Canadian operations. Robert D. Caine, former v.p., was named exec. v.p. He is responsible for KVP Div. operations in the U. S. Huber R. O'Donnell was named exec. v.p. in charge of



Hunter Caine



O'Donnell

Sutherland Div. operations. Also announced was the appointment of J. B. Hopkins to bakery-products mgr. of the food-packaging dept. in the Sutherland Div. of KVP Sutherland.

Four sales-executive promotions have been made by Crown Zellerbach Corp., San Francisco. Named to the new posi-

ANSCO CADET FLASH





THE WORLD'S LARGEST PRODUCERS OF THERMO FORMED PRODUCTS AND PACKAGES

SIX SUCCESS PACKAGES

Pressure-Formed in Plastic by PLAXALL

ANSCO'S flash camera outfit may be displayed upright or hanging. Contoured plastic provides complete visibility and overall package strength.

AMPLEX packages fragile flash bulbs in eye-catching Slideplax. Perfect display plus product protection.

CHAPSTICKS are neatly held in the undercut cavities of this new dispensing counter display. In assembly, the yellow styrene forming slides readily onto the cardboard easel.

MILLIONS of oriented styrene closures produced at lowest cost on Plaxall's high-speed precision pressure-forming equipment. Used by leading food and beverage companies throughout the world on paper cups and tubs.

GILLETTE'S new adjustable razor is now packaged in Plaxall's Blisterplax —a butyrate blister pressure-formed for unusual uniformity and strength, and heat sealed onto a display card.

LIGGETT & MYERS cigarette and lighter combination looks like a good buy — and is. Smartly packaged in clear acetate by Plaxall to effectively create impulse sales.

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PLASTIC PACKAGES
that will sell
your product
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OVER TWENTY YEARS OF FORMING EXPERIENCE
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Plants & People [Cont'd]

tion of sales mgr. for the multiwall bag sales div. is Robert F. Gill. Other promotions in the multiwall div. are: Fred H. Bostock: to machinery sales mgr., Robert Minahen: to Western regional sales mgr., and Donn E. Nissen: to San Francisco district sales mgr.

Kaiser Aluminum & Chemical Corp., Oakland, Calif., has established can technical service laboratories at Trentwood, Wa&h. The laboratories, to be headed by Wayne L. Tibbitts, will include four sections: organic coatings, test-pack evaluation, container structures and test-can fabrication. Work of the laboratories will include projects involving aluminum cans and ends for food and non-food products. Test packing will be done both at Trentwood and in the field, says Kaiser.

New management assignments in pressure-sensitive tape, decorative ribbons and related product areas have been made by Minnesota Mining & Mfg. Co., St. Paul. Robert W. Mueller, v.p., is



now responsible for the industrial tape div., the retail tape, gift wrap, Mid-States Gummed Paper and Derby Sealers divs. Robert W. Adam, formerly general mfg. mgr. for all 3M pressuresensitive tape, is new gen. mgr. of the industrial tape div. E. L. Decker becomes gen. sales and mktg. mgr. for the industrial tape div. C. B. Sampair continues as exec. v.p. for all 3M tape and ribbon products.

Marathon, Div. American Can Co., Menasha, Wis. has appointed Lud A. Vessel to product mgr., film packaging. He will manage sales of Marathon flexible packaging to the meat industry.



Samuel A. Angotti has been appointed v.p. of Standard Packaging Corp., New York. He will be responsible for Standard's converting and packaging group, which consists of 13 operating divs. and subs. P. Richard Clark has been named senior v.p. Prior to joining. Standard Mr. Angotti was v.p. of

Angotti Prior to joining Standard Packaging, Mr. Angotti was v.p. of KVP-Sutherland Paper Co.

Tee-Pak, Inc., Chicago manufacturer of cellulose casings for meats, has appointed a new special sales representative and four regional sales mgrs. H. C. Flonacher becomes special sales representative and is assigned to the office of the v.p. He joined Tee-Pak in 1945 and was mgr. of the North Central district prior to his new appointment. The new

regional sales mgrs. are: Martin Lynn, Eastern area; Donald E. Focht, Southern area; Donald D. Barraca, Central area, and Gordon W. Cummins, Western States area.

G. E. McCorison, formerly pres., has been elected board chairman and



cer of Thilmany Pulp & Paper Co., Kaukauna. Wis. He succeeds E. H. Jennings, who has resigned, but will serve as a director

chief exec. offi-

McCorison Dostal

of the company and a member of the executive committee. G. L. Dostal, previously v.p., becomes press of Thilmany. He has been with the company since 1946. In other promotions, Fred Herbolzheimer, Jr., has been named v.p. of mfg., and M. L. Downs v.p. and technical director. Arthur M. Schmalz, former v.p. and a 55-year Thilmany veteran, has resigned.

Chase Equipment Co., Brooklyn, maker of filling machinery, has been purchased by C. W. Logeman Co., also of Brooklyn. Chase will be operated as a division of Logeman.

Texas Eastman Co., sub. Eastman Kodak Co., Rochester, N. Y., has started commercial production of polypropylene at Longview, Tex. The plant is expected to achieve a 20-million-pound-per-year capacity by mid-year. The polypropylene will be marketed under Eastman's "Tenite" trade name by Eastman Chemical Products, Inc., Kingsport, Tenn.

Edward H. Reading has joined the packaging div. of Warner Bros. Co., Bridgeport, Conn., as quality-control director. His office is in Bridgeport.

Equitable Paper Bag Co., Long Island City, N. Y., producer of flexible packages and specialty paper bags, has named Jack Kaltman to the post of general mgr. of the flexible packaging div. Mr. Kaltman previously was Eastern sales mgr. of Visking Co., div. Union Carbide Corp.

Frank M. Harding has joined Koppers Co., Pittsburgh, as product mgr., converter and industrial sales, for Durethene polyethylene film, a product of the company's plastics div. Mr. Harding will be responsible for developing new markets for the packaging film.

St. Regis Paper Co., New York, has made several appointments in the general management staff of its corrugated-container div. Among these are: G. D. Robinson, to gen. sales mgr.; G. M. Kincade, to asst. gen. sales mgr., and F. L. Goetz, to sales mgr. of the supplier's national accounts.

Ralph A. O'Reilly, Jr., has resigned as general coordinator of service parts packaging at General Motors Corp., Detroit, to join Container Laboratories, Inc., as mgr. of its Eastern div., with

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Plants & People [Cont'd]

headquarters in New York. Prior to becoming corporate packaging engineer for GM 15 years ago, Mr. O'Reilly for two and a half years was packaging engineer at GM's Detroit Diesel Div.

Package Machinery Co., East Longmeadow, Mass., has named William J. Maybury, Jr., as sales mgr. of its National Bakery Div. Mr. Maybury was formerly asst. sales mgr. of the div., which manufactures automatic packaging equipment for the bakery industry.



Rurnha

Stanley W. Burnham has been appointed to the newly established position of mgr., mktg. development, Lehn & Fink Products Corp., New York, packager of toiletries and household chemicals. He was formerly director of purchases and package engineering. Mr. Burnham

will be responsible for the investigation of acquisition opportunities for the corporation, the coordination of creative packaging and market planning.

The Hamersley Mfg. Co., Garfield, N. J., maker of glassine and greaseproof papers, has promoted Robert R. Helf to sales mgr. Mr. Helf was formerly with Marathon, Div. American Can Co. Also appointed was George C. Hamersley, now asst. treas. and member of the board of directors.

John F. Price has been promoted to sales mgr. of Consolidated Aluminum Corp., Jackson, Tenn. His duties will primarily be in the field of foil and allied products, the company reports. Mr. Price previously was product mgr. of the company's foil div.

Richard E. McFarland has been appointed advtg. mgr. for Avery Label Co., Monrovia, Calif. Mr. McFarland will also supervise Avery's art dept. Avery Label designs and manufactures pressure-sensitive labels. Mr. McFarland was formerly with Hixon & Jorgensen Advertising, Inc., Los Angeles.

National Distillers & Chemical Corp., New York, is constructing a 60-millionpound-per-year high-density polyethylene plant adjacent to its conventionalpolyethylene plant in Houston, Tex. The new facility, to be completed in late 1962, will mark National's entry into the production of high-density polyethylene and will be operated by National's U. S. Industrial Chemical Co. Div. The new high-density polyethylene will be manufactured under a licensing agreement with Phillips Petroleum Co. and will be marketed under USI's brand name, "Petrothene." The USI div. is currently producing low- and medium-density polyethylene.

Max L. Melius has been appointed research and development coordinator of S. Curtis & Son, Sandy Hook, Conn., producer of plastics packaging. Previ-

WS SIFTER TOPS

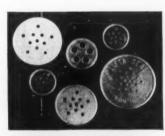
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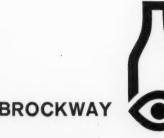
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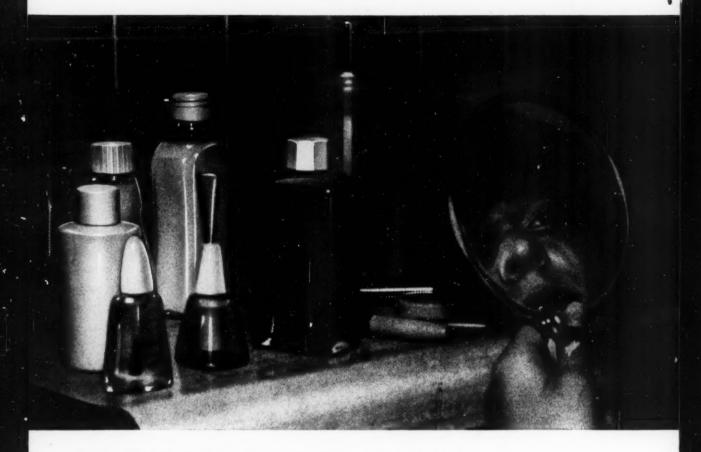








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Sales Offices in Principal Cities SUBSIDIARIES: Demuth Glass Works, Inc., Parkersburg, W. VA. Tygart Valley Glass Co., Washington, Pa.

Celluplastics Inc., Newark, N. J.

Plants & People [Cont'd]

ously he headed his own company, Pressure Molded Plastics, Bridgeport, Conn. Mr. Melius will concentrate on future needs in plastic and boxboard packaging, says Curtis.



FF7 1

Frank ri. Wheaton, Jr., pres. of the Wheaton Glass Co., Millville, N. J., has been elected to the board of directors of American Can Co., New York. Mr. Wheaton is also pres. of the American-Wheaton Glass Corp., a majority-owned sub. of American Can. Wheaton

Glass supplies technical and management assistance to American-Wheaton.

Robert J. McDonald b comes mgr. of packaging service, Minneapolis, for Bemis Bro. Bag Co., St. Louis, He succeeds William J. Geimer, retired.

Polyspand Inc., Irvington, N. J., maker of custom packaging and expandablepolystyrene products, has appointed Bertram Mann to the position of sales mgr. He will have responsibility for the sales of packaging items.

A \$1.5-million expansion is nearing completion at the Davenport, Ia., plant of Aluminum Co. of America, Pittsburgh, New foil laminators and supporting equipment, now being installed, reportedly will enable Aleoa to produce unprinted foil in combination with paper, wax, paperboard and plastics. These materials are designed for use in labeling and packaging, and will be marketed under the trade name Alwrap.

Recently appointed mgr. of advtg. and public relations for Creative Packaging, Inc., Indianapolis, was Stanley R. Trusty. He was formerly mgr. of sales production at Paper Packaging Co., a div. of Creative Packaging.

The Rap-In-Wax Co., Minneapolis, has formed a wholly owned European sub., to be known as Rap-In-Wax A.G., with headquarters in Zug, Switzerland, Rap-In-Wax A.G. has acquired a substantial interest in Rationelle Verpackung, Zurich, a Swiss producer of meat packaging and cast-coated papers.

Robert L. Daly has been appointed sales mgr. of Northeast Container Corp., Bergenfield, N. J., manufacturer of corrugated containers, folding cartons and specialties. Mr. Daly was formerly with Standard Corrugated Case Corp., Ridgefield, N. J.

Arenco A/B, a Swedish producer of machinery for the packaging and other fields, has celebrated its 75th anniversary. In connection with this observance, the company has moved from Stockholm to modern headquarter and factory buildings at Vällingby, a suburb of Stockholm. Arenco was founded in 1885 to market a machine for the manufacture of match boxes. Some 30 years

later, the firm moved into the cigarettemaking machinery field and since has become a diversified producer of packaging machinery. Arenco subsidiary companies are located in the U.S., Britain, W. Germany, Belgium, Denmark and Argentina. The U.S. company —Arenco Machine Co., New York—is a supplier of filling, proportioning, closing, sealing and checkweighing machinery in the U.S.

River Raisin Paper Co., Monroe, Mich., has named James G. Ladley as gen. sales mgr. River Raisin, a div. of Union Bag-Camp Paper Corp., manufactures corrugated and solid-fibre shipping containers for the parent company.

William Tell Thomas, formerly advtg. mgr. of Kwikset Sales & Service Co., sub. American Hardware Corp., Anaheim, Calif., has been appointed director of mktg. Among his responsibilities will be product packaging for Kwikset.

Harold Byron Smith, Jr., has been named mgr. of new product divs. by Illinois Tool Works, Chicago. He will be fully responsible for the operation of the Paktron Div., Alexandria, Va., and the Conex and Fastex Divs. at Des Plaines, Ill. Conex produces plastic containers and can carriers.

Gilman Paper Co., New York, has merged two of its subsidiaries: Kraft Bag Corp. and St. Marys Kraft Corp. Kraft Bag will be operated as a div. of St. Marys, and will have headquarters in New York.

The Dow Chemical Co., Midland, Mich., will build a second polyolefin plant at Plaquemine, La. The new plant will produce medium- and high-density polyethylene, ethylene copolymers and polypropylene. It is expected to be in operation by the second quarter of 1962.

T. E. Ellison has purchased complete ownership of Biner-Ellison Machinery

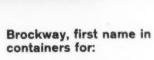


T. Ellison S. Ellison

Co., Los Angeles. George
M. Biner has retired from the business. Stephen F. Ellison has joined the company as gen. mgr. Biner-Ellison was es-

tablished in 1950 and manufactures fillers, labelers, unscramblers, air cleaners, corkers, conveyors, accumulators, vacuum units, work belt tables, conveyor coolers, conveyor heaters and other accessory equipment for filling and labeling.

Formal approval has been granted by the Japanese government to Food Machinery & Chemical Corp., San Jose, Calif. and Toyo Seikan Kaisha, Ltd., Japanese can manufacturer, for participation in a joint venture to be called Food Machinery (Japan), Ltd. The new facility will produce food-canning, processing and packaging equipment, fresh-produce packing equipment and related machinery. Local management





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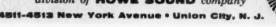
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Plants & People [Cont'd]

service and manufacturing personnel will be provided by Toyo Seikan. Among the directors of the new venture are T. Takasaki, chairman of Toyo Seikan: A. Wayne Elwood, pres. of FMC International, a div. of FMC, and Hubert L. Byrd, exec. v.p. for FMC's machinery divs.

A research and development dept. designed to advance the uses, effectiveness and selling power of tags and labels has been formed by the Jackmeyer Corp., packaging and printing suppliers, with headquarters in New York.

Names, Inc., is a new subsidiary of Lippincott & Margulies, New York industrial and package designer. The firm has been organized to handle selection of corporate and brand names. Names Inc.'s service reportedly includes collecting, screening, evaluating and supervision of legal activity.

The Plastics Div. of Monsanto Chemical Co., Springfield, Mass., is increasing by 30% the capacity of its Texas City, Tex., high-pressure polyethylene plant. It is scheduled for full operation early in 1962, according to Monsanto.

1

A new company, Wright Machinery Co. Ltd., Brentford, Eng., has been formed. It will take over and expand the operations of Industrial Products Ltd., manufacturer of checkweighing equipment. The new company will work in close association with the Wright Machinery Div. of Sperry Rand, Durham, N. C. Equipment manufactured by the British company will be mar-keted in the U. S.



Dr. William H. Aiken has ioined Union Bag-Camp Paper Co., New York, as director of research and development. Dr. Aiken formerly directed research and development for Gardner Board & Carton Co. and its successor, Dia-mond Gardner Corp. · Most recently he served as

a director and v.p., research & development, of Personal Products Corp., a Johnson & Johnson company.

Edward F. Prodigo, formerly associated with Dumont Inc. has formed his own packaging-consultant company: Edward F. Prodigo, Inc., 2 W. Clinton Ave., Tenafly, N. J.

Several changes in personnel have occurred at Pierson Industries, Inc., Boston. Robert B. Dalzell has been named v.p., sales; Peter A. B. Gardiner, sales mgr., and Charles Jago, Jr., gen. mgr. Pierson supplies polyethylene film.

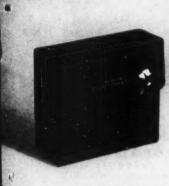
Private Brands Co., Div. WPC Enterprises, Bloomfield, N. J., is constructing a new contract-packaging plant in Clifton. The new facility, with total production area of 107,000 sq. ft., is scheduled to open in August. Complete custompackaging services - including auto-

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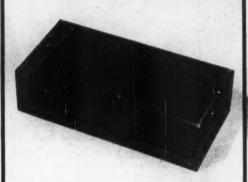
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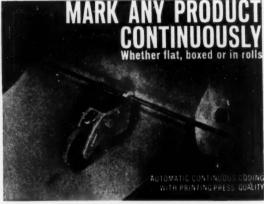
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Plants & People [Cont'd]

matic or semi-automatic equipment for packaging a wide variety of products in plastics, glass, metal, paper or foil containers—will be available at the new plant, says Private Brands.

Scott Paper Co., formerly of Chester, Pa., has moved its administrative offices to larger quarters at International Airport, Philadelphia 13, Pa.

Arabol Mfg. Co., New York manufacturer of industrial adhesives, has opened two new plants. The new adhesive-producing facilities are located in Delaware, O., and Portland, Orc.

Bowater Packaging, Ltd., Knightsbridge, London, England, has begun construction on a factory at Stevenage. The new facility, for the manufacture of corrugated containers, is scheduled to be completed next March.

Lord Baltimore Press, New York, manufacturer of folding cartons and an affiliate of International Paper Co., New York, has acquired, through International Paper, Envases Aztlan, a Mexico City folding-carton plant. Lord Baltimore reports that this acquisition will enable it to better serve its accounts in Mexico.



Higgin

The St. Regis Paper Co., New York, has named Spencer P. Higgin pres. of the newly formed St. Regis International Corp. He will be responsible for foreign operations of St. Regis outside of the U. S. and Canada, with headquarters in London. Mr. Higgin has served as man-

aging director of Australian Sisalkraft Co., and most recently as pres. of American Sisalkraft Co., now a St. Regis division.

Knox Glass, Inc., Knox, Pa., has opened new sales offices in Philadelphia and Baltimore. The Baltimore office, at 841 E. Fort Ave., will be under the direction of William A. Seger. Walter Caskey will be Philadelphia district sales mgr., with offices at 15 Esso Rd., Bala Cynwyd, Pa.

The metal products div. of Koppers Co., Inc., Pittsburgh, is expanding manufacturing facilities for its container machinery dept. by enlarging its Glenarm, Md. plant 16,000 sq. ft. The div. produces container-making machinery.

Bartelt Engineering Co., Rockford, Ill., has promoted Stanley Macfarlan to West Coast mgr. and has formed a Calif. district sales office. The new district headquarters are located at 235 Montgomery St., San Francisco, Bartelt manufactures a line of automatic packaging machinery.

A major expansion program—including a project that doubles the production [Continued on page 240]



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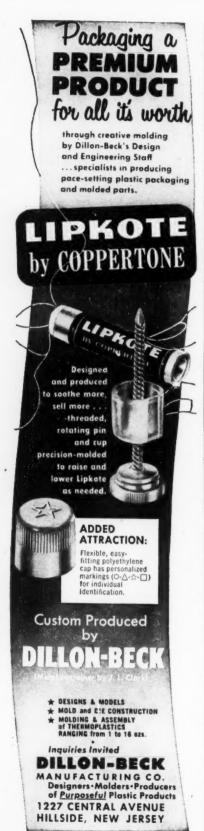
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Cosmetics



Plants & People

[Continued from page 2371

of its St. Louis plant and the opening of a new plant in Jackson, Miss.—has been completed by Midland Container Corp., St. Louis. Midland manufactures corrugated shipping containers.

The Wabash Fibre Box Co., Terre Haute, Ind., a div. of the Western Paper & Mfg. Co., Dayton, O., has opened a new corrugated-box plant at Fort Wayne, Ind. Wabash Fibre also operates plants in Chicago and Terre Haute.

Oscar I. Judelshon Inc., manufacturer of slitting and rewinding machinery, has moved to expanded facilities at 404 Tonnele Ave., Jersey City. The company will maintain a sales office at 350 Fifth Ave., New York.

Murnane Paper Co., Chicago, is building a new plant in Northlake, Ill. Occupancy is scheduled for late summer. The company is a supplier of converted paperboard packaging products.

Two seven-color rotogravure presses for printing aluminum foil and foil laminates are now being operated at the Silvertown factory of Venesta Foils Ltd., London, W.C.2, England.

Field Paper Box Co., Chicago, will move to a new manufacturing plant and office this summer. The new facilities are located in the Centex Industrial Park, Elk Grove Village, Ill.

Huntley Soyster & Associates, San Francisco package-design firm, has changed its name to Soyster & Ohrenschall, Inc. The principals of the firm are Huntley Soyster and Robert F. Ohrenschall. Mr. Soyster headed the former company for eight years.

Package Design Associates, Ltd., London, is now offering a package-design and information service for the European market. The service is similar to the one it has been offering British manufacturers for the U. S. market. More information may be obtained by writing PDA, 106 Gloucester PL, London W. 1.

Rose Color Inc., producer of process color lithography in New York, has moved to larger quarters at 6 Varick St., New York 13.

Package Forming Machinery Co., Ltd., has moved to 352 McRae Dr., Toronto 17, Canada.

Promotions

David Benjamin: to v.p. of Aerosol Techniques, Inc., Bridgeport, Conn., an aerosol manufacturing company. Mr. Benjamin will be in charge of planning and engineering.

Paul H. Bennett: to asst. gen. sales mgr., The Dobeckmun Co., Cleveland, a div. of The Dow Chemical Co.

Earl L. Bradley and Jack D. Tovin: to sales mgr., New York national accounts office for folding cartons, Container Corp. of America, Chicago. Albert A. Austin: to gen. sales mgr. of the Philadelphia folding carton div. Joseph P. Giacalone: to sales mgr., Philadelphia. Theodore P. Langdon and George R. Sutch have been promoted to asst, sales managers.

Richard A. Dolan: to Southern district sales mgr. for film operations, packaging div., Olin Mathieson Chemical Corp., New York.

Walter Hobbs, Jr: to advtg. mgr., bakery machinery div., American Machine & Foundry Co., New York.

William A. Donahue: to industrial sales mgr., Arno Adhesive Tapes, Inc., Michigan City, Ind.

E. J. Carroll: to v.p. of mfg., the Chicago Carton Co., Chicago R. D. Conley: to v.p., bakery sales; W. E. Dennehy: to treas., and W. G. Futterer: to seev.

Edward W. Page: to Midwest product mgr. for can-sealing compounds, Dewey & Almy Chemical Div., R. W. Grace & Co., Cambridge, Mass.

Francis P. Peters: to asst. sales mgr., Columbia Box Board Mills, paperboard containers, Chatham, N. Y.

Appointments

George H. Broomfield, Jr.: to asst. advtg. and prom. mgr., film operations, packaging div., Olin Mathieson Chemical Corp., New York.

Tom L. Jones: to sales mgr. in charge of multiwall bag sales, Gilman Paper Co., New York.

James B. McNamee: to New England district mgr., Sinclair & Valentine Co., printing-ink div. of American-Marietta Co., New York.

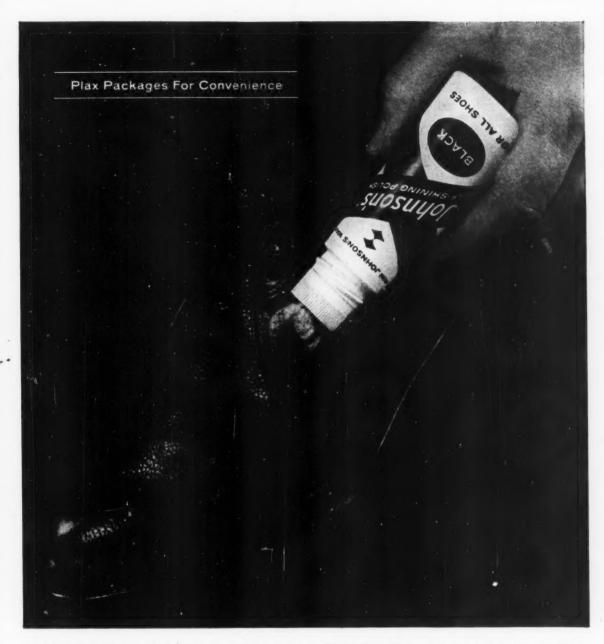
Obituaries

John G. Murray, v.p. & tech. director of Continental Can Co., New York, died on Jan. 26. He was 54. Mr. Murray joined Concan in 1929. He was elected v.p. in 1954 and held the title of tech. director since 1957.

A. Thomas Buskens, v.p. & mgr. of the Chicago sales office of Pneumatic Scale Corp. Ltd., Quincy, Mass., died Jan 24. He was 65 and had been with Pneumatic Scale since 1924. He was appointed mgr. of the Chicago sales office in 1953 and became v.p. in 1959.

M. L. Madden, former board chairman of Hollingsworth & Whitney Co., Chester, Pa., sub. of Scott Paper Co., died Jan. 16 at the age of 94. Mr. Madden joined Hollingsworth & Whitney in 1887 at Gardiner, Me. He became pres. in 1931 and chairman of the company in 1945.

Stanley Bell, director of supplies and marketing of Bowater Paper Corp. Ltd., London, Eng., died Feb. 12. Mr. Bell, who was 61, was a director of the Bowater Corp. of North America Ltd., Montreal.



SQUEEZE BOTTLE POLISH BRIGHTENS SALES, TOO

Plastic packaging now adds sales appeal to once-plain shoe polish. The easy-to-use applicator bottle shown here is an industry innovation. It is also an example of Plax engineering and production skills working in cooperation with

Johnson's Wax designers. Plastic containers are safe, unbreakable, lightweight and corrosion-resistant. And Plax—pioneer in plastics—offers 26 years of experience to solve your packaging problems.

PLAX GIVES A PACKAGE

A PLUS

Plax Corporation, Hartford, Conn. • In Canada: Plax Canada Ltd., Toronto.

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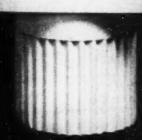
...the ONLY
see through
display
package!













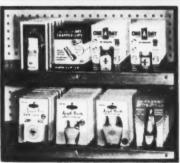
In today's fast-growing, highly competitive, self-service market the exclusive touch of unique packaging can make the difference. Such an innovation is Nevins' inspired, new Stretch-Pak Display Package that wraps your product into the selling message in a seemingly invisible film. The rewards are gratifying: products capture more display place, have greater see-ability, higher impulse appeal—it's like putting your product on a pedestal wherever it is sold.

The Stretch-Pak Display Package actually makes your selling message an integral part of the package itself . . . goes wherever your product goes . . . dominates a shelf, rack or counter. Your product appears to float in air, creating an irresistible urge to buy, surrounded by a colorful, selling message. Bright, easy-to-spot Stretch-Pak packages hang from pegs . . . can be stacked on shelves too . . . because Stretch-Pak can hold your product along the base of its display card.

Full dimensional Stretch-Pak can enfold more than one product on the same card, in virtually any size and shape . . . pilferage is discouraged. Your products can be custom-packaged by the Stretch-Pak division of the Nevins Company on machines of their own development or this equipment can be purchased for your own in-plant packaging.

Custom-designed Stretch-Pak Display Packages create a fascinating difference at point-of-sale — to increase sales where it counts! Write or call today for the full, amazing, new Stretch-Pak story.





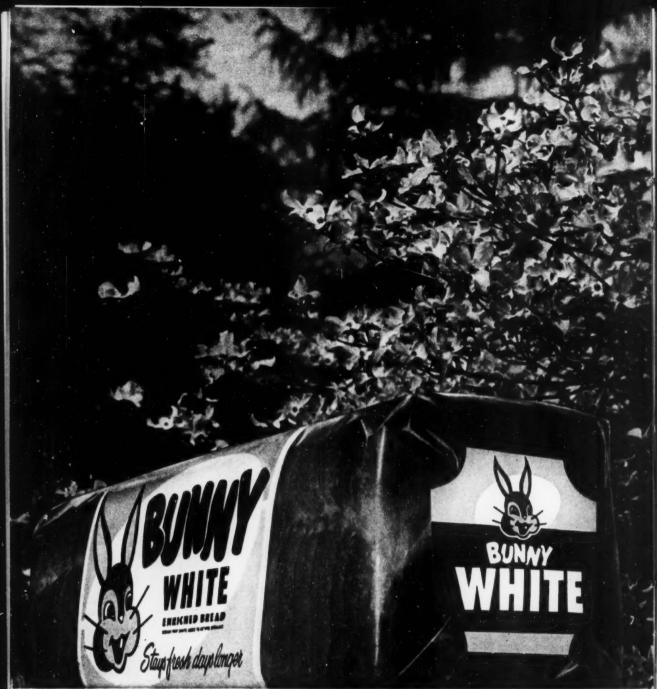
STRETCH-PAK Division

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DESIGNING, PRINTING AND MANUFACTURING PRECISION FOLDING CARTONS, DISPLAY CONTAINERS AND MULTICOLOR LABELS SINCE 1902



Film for bread wrapper extruded from Tenite Polyethylene by Pollock Paper Company.

GREAT NAMES

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Film of Tenite Polyethylene provides a sparkling, clear wrapper for bread. Packaged in this film, bread feels softer and fresher to the touch...keeps salable longer POLYETHYLENE ... has fewer stale returns. Couldn't this versatile film boost sales for one of an Eastman plastic your products?

Eastman Chemical Products, Inc., subsidiary of Eastman Kodak Company, Kingsport, Tennessee



ONE OF THESE

Battle Creek model 475's will soft film overwrap your thin, rectangular or irregularly shaped products at high speed



Model for 475 General Rectangular Applications



Model 475-H for Soft Irregular Products



Model ATE SN for Square Soft Home



Model 475-S for Thin or Thick Items



Model 475-TS for Soft Rounded Shapes



Model 475-TT for Irregular Products



· Model 475-N for Paper Napkin Overwrapping



Model 475-T for Textile Products



,

products like these can be beautifully packaged at speeds up to 75 per minute



These usely developed machines have been thoroughly field tested in more than 100 installations. All machines create attractive, weld-sealed packages in polyethylene and most of the currently available plastic films nesides being











EQUIPMENT

2 MATERIALS

[Continued from page 76]

aging Show this month, is available with an 8-ft, or 10-ft, conveyor. With the former, it can handle the output of a single bag-loading machine; with the latter, it seals the output of two bag loaders. Either bead edge seals or edge seals can be made. Excess end flap is automatically cut away and discarded. Optional equipment includes an electric-eye attachment which halts the conveyor upon detection of an improperly aligned bag, an ink-impression code dater and an automatic label applicator. Amsco Puckaging Machinery, Inc., 31-31 48th Ave., Long Island City 1, N.Y.

Portion-control packaging program

Lily-Tulip offers a portion-control packaging program which consists of a "pour-spoon-or-shake" dispensing container and a specially developed machine for filling it. Claimed to achieve improvements in pre-handling, filling and scaling of individual pertion-controlled items, the package/machine combination will be demonstrated at the Packaging Show this month. According to the company, the completed package can be produced at low cost and high speed. Other cited advantages: complete product protection via a heatsealed container handled solely by machine; adaptability to many types of liquid or semi-viscous products, and a convenient package closure that is easy to open and offers the option of dispensing by pouring, spooning or shaking. Also on display at the Packaging Show will be a new machine that clinches plastic lids under the rolled rims of paper cup containers. Designed to assure a sanitary. tamperproof package, the clinch-on unit is available in automatic and semi-automatic models. It reportedly can be integrated into existing filling and capping lines. Lilv-Tulip Cup Corp., 122 E. 42 St., New York 17

All-plastic milk container

Now available from Mojonnier and on display at the Packaging Show this month—is an all-plastic milk container vacuum formed from rubber-modified high-impact



polystyrene. Container sizes are: half-pint (illustrated), gallon and two-gallon. The container is formed in two parts, which are heat sealed horizontally to form the complete unit. A pouring spout on the top accepts a plastic or paperboard cap that can be made tamperproof with the application of thermoplastic cement. Brand identification achieved with a pasted-on printed paper label or by printing only on the cap (which gives the container

a "non-commercial" appearance for greater table appeal). The new milk container is offered in natural polystyrene or a variety of colors. Among the advantages cited for this container are: light weight, easy handling and pouring. space saving in home refrigerators and retail dairy cases, and the elimination of leakers. In addition to merchandising appeal, says the supplier, the chief advantage of the plastic milk container to dairies is that it reduces packaging inventory. Only a few sizes need be stocked, with product data printed only on the cap and/or label, the company points out. Also, says the supplier, the plastic container can be stored indefinitely without special air conditioning or handling controls. Cost of the half-pint container, not including cap and label, is \$15 per thousand. Filling and capping reportedly can be accomplished on existing equipment, with minor modifications. The supplier also has developed a machine for sealing the two halves of the polystyrene milk container in the user's plant. The scaler will be made available in manual, semi-automatic and automatic models. The two-part containers are shipped in nested form, for savings in transportation costs. Albert Mojonnier, Inc., Franklin Park, Ill.

Heat tunnel for shrinking film

New from Cleveland-Detroit is the Clamco Model 850 heatshrink tunnel, designed for use with any type of heatshrinkable film. The unit is suggested for use in super-

markets, to create tight-fitting, appealing film packages for produce, meat, fowl and delicatessen items. The item to be packaged is first wrapped in shrinkable film; then the film is sealed. Finally,



the wrapped item is carried by conveyor through the tunnel, where controlled heat shrinks the film in seconds to a tight fit. The product is not affected by heat in this operation, the supplier notes. This shrink tunnel can be seen at the AMA Packaging Show this month, along with other new equipment from the company. These include: the Model 750 Wrapping Unit, which utilizes roll film to speed up the wrapping of a wide variety of products, including soft goods, meats and cheeses; and the Model 280 Poly Scaler, an automatic machine that is reported to seal polyethylene bags at high speeds and low cost, Cleveland-Detroit Corp., 5400 Brookpark Rd., Cleveland 29.

Selective container feeder

Island Equipment introduces the Styl-O-Matic Select-O-Count, a machine that automatically selects and counts a number of containers, then feeds them to a conveyor belt. The preset number of containers is counted by pressure on a solenoid switch, after which a pusher bar guides the group of containers to the belt. A guillotine bar keeps containers in line, Counting capacity of this new unit, which can be seen at the Packaging Show this month, is 60 to 240 containers per minute, says the supplier, Island Equipment Corp., P.O. Box 38-276, Miami 38, Fla.

Steel-strapping developments

Inland Wire is introducing three new machines at the Packaging Show this month. The Model FAWM automatic wire-tying machine is designed for use with round steel strapping. The Model FGA is an automatic strapping machine which feeds, tensions and seals flat steel strapping to a package. The Model G is a hand-operated tying machine for use with 8- and 10-gauge round steel strapping. Inland Wire Products Co., 3947 S. Lowe Ave., Chicago 9.

Foil-lined fibre can

A fibre-bodied, foil-lined can is one of the new products to be exhibited at the Packaging Show this month by R. C. Can Co. The can is designed primarily for the packaging of frozen juice concentrates. However, says the supplier, a number of other products heretofore considered impractical for fibre cans—such as motor oils—can be packaged in the liquid-holding container. R. C. Can Co., 9430 Page Aire, St. Louis 32.

10-station rotary piston filler

Pfaudler's RP210 is a 10-station rotary piston filler for liquids. On display at the Packaging Show this month, the

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Equipment & Materials | Continued

new unit can accommodate glass, metal or paper containers. It is equipped with a continuous through conveyor driven from the base of the filler and a feed screw to time containers onto the filler. Filling speeds of up to 300 containers per minute, with fill accuracy within 1/10 oz., can be achieved, the supplier reports. The Plaudler Co., Dir. Plaudler Permutit, Inc., Rochester 3, N.Y.

Twin-head liquid-filling machine

Glass containers up to 2-oz, capacity can be accommodated on Kahlenberg Globe's new Model 117-EF liquid-filling



machine. A star wheel automatically indexes two containers under dual filling spouts during each filling cycle. The continuously indexing machine features variablespeed drive, permitting a production-rate range of 28 to 60 contain-

ers per minute, the supplier says. Bottom-up fill eliminates foaming and helps speed up the operation. Placement of the star-wheel indexing mechanism, the manufacturer notes, enables the filling machine to be positioned alongside a standard conveyor line for container pick-up and discharge. This new filler can be seen at the AMA Packaging Show this month. Kahlenberg Globe Equipment Co., Sarasota, Fla.

Five-way weight sorting

Make-up or take-away in package weights is speeded and simplified with its new 5-Way Classifier, reports Illumitronic Systems. The machine classifies and sorts underweight, overweight and on-weight packages into five separate channels, weighing in motion to accommodate the continuous flow of production lines. This new unit will be shown at the Packaging Show this month. According to the supplier, the weight sorter is accurate within 1/30 oz. and can operate at speeds up to 300 packages per minute. Illumitronic Systems Corp., Sunnyvale, Calif.

Improvements in rotary filling

Two new rotary filling machines-designed for aerosol and other filling operations-are being exhibited at the Packaging Show this month by Kartridg Pak. The supplier's KP-1800 Under-Cap is claimed to be the first aerosol pressure filler to put propellant into a can before the valve is crimped into place. Because valve openings are necessarily small, this propellant-depositing technique offers the potential of greatly increased packaging-line speeds, says the supplier. Filling and crimping are done on the same head. In machine operation, the head comes down on the can, makes a pressure seal against its crown and injects the desired amount of propellant under the valve before crimping. Using a six-head model of the machine, says the company, filling speeds of up to 120 cans (16-oz, content) per minute can be achieved. The other new rotary filler is the KP-1900 Coaxial. It accommodates viscous products and is adaptable to aerosols or non-pressurized containers. Instead of the conventional piston-filling action, this new unit uses a metering piston that is pushed upward as the can is being filled. Amount of fill is controlled by predetermining travel distance of the piston, which drops by gravity on the return cycle. Advantages of the new filler, as cited by the supplier, include: greater flexibility in change-over (fewer parts to clean, no reservoir to empty); higher speeds; fewer moving parts, and greater accuracy of fill (the piston virtually floats in the product, so there is negligible pressure difference around it). The Kartridg Pak Co., sub. Oscar Mayer & Co., Franklin Park, Ill.

Automatic silk-screen printer for vials

Amaco introduces the Arbis 5FO automatic vial and ampoule silk-screen printing and firing unit at the AMA Packaging Show this month. This machine will handle vials and ampoules up to 20mm diameter and 150mm length. Output varies according to container size; 10cc ampoules, for example, can be printed at speeds up to 37 per minute, says the supplier. The machine is equipped with a thermostatically controlled electric furnace with an automatic, adjustable infeed conveyor. The printing machine and furnace (when cold) can be adjusted from one size of container and print to another in less than 10 minutes, the company reports. For information, contact Amaco, Inc., 2601 W. Peterson Ave., Chicago 45.

Electric gummed-tape dispenser

On view at the Packaging Show this month is Derby Sealers' new Model 310 electric gummed-tape dispenser. It is designed for shipper-sealing operations requiring a variety of lengths of reinforced gummed tape. According to the supplier, a light touch on the actuator bar delivers any tape length instantly. No mechanical settings or adjustments are required. A feature of the machine is a patented floating shear-type knife with the upper blade removable to facilitate maintenance. Optional features include a tape straightener and heater attachment. Derby Sealers Div., Minnesota Mining & Mig. Co., Derby, Conn.

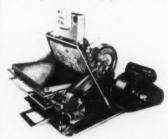
Portable clip-closure equipment

Tipper Tie will exhibit new portable models of its Tipper Clipper line of clip-closure machines at the Packaging Show this month, Known as Porta-Tie, they are said to do everything the larger standard models will do, with the added advantage of portability. The new machines are designed primarily for the closing of polyethylene bags and wraps used by meat packers. Portability of the new models will widen the applications of the clip-closure system, including the closing of drum liners in the chemical and pharmaceutical industries, says the supplier. Machines are available in models for applying small, medium or large clips and weigh about 6 lbs. Tipper Tie Products of New Jersey, Inc., 2165 Morris Ave., Union, N. J.

Die-cutting and creasing press

Thomson-National has developed for commercial use a new Thomson AC-DM die-cutting and creasing press, with a

working area of 28 by 41 in. It can be seen at the Packaging Show this months. Among the features of this new unit is a completely self-adjusting air clutch which makes it possible to run the press on an automatically



timed stop-and-start basis. This feature, says the supplier, makes for simplified maintenance. A double micrometer adjustment on the press also enables the operator to adjust for wear on either side of the platen, thereby extending press and die life, the company notes. Additional information on this new machine is available from Thomson-National Press Co., Franklin, Mass.

Single-knife plastic-film slitter

Now available from Oscar I. Judelshon is a single-knife slitter for thermoplastic film that reportedly will produce a finished cut roll in less than one minute. Called the Model 313 Unicut, it handles paper as well as film, in rolls up to 14-in. diameter and 48-to-72-in. length. Material ranging in thickness from 0.4 to 60 mils can be accommodated, says the supplier. The machine, which is on display at the Packaging Show this month, is ideal for use with slip and cal-[Continued on page 252]



One Protective Ingredient Important to All!

Vital to protecting the savory flavor and freshness of these popular food products in Thilco's versatile, heat sealable POLY-KRAFT Pouch Papers — the packaging ingredient that safeguards products from M.V.T. deterioration by sealing moisture-vapor in or out where you want it!

Like many foods of distinctive flavor and quality, Thilco POLY-KRAFT is not a single, ordinary compound, but a blend of special treated ingredient papers combined with poly, foil, cellophane, glassine and other papers or materials to best fulfill the most in lividual protective appetities your products may hunger for.

Thilco POLY-KRAFT is available in lightweight blends for automatic Pouch Packaging, box liners and bags, or, in heavyweight blends for bulk packaging and carton overwraps. Furnished in rolls for automatic forming/filling machines —

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EXPANDEX OFFERS A TURN-KEY EQUIPMENT SYSTEM THAT IS LOW-PRICED, OPERATES ECONOMICALLY AND TAKES UP LESS FLOOR SPACE. Here are some of the exclusive features that make this possible: DRY HOT AIR PRE-EXPANDER shortens curing time; COMPACT TURBOBOILER produces a giant-sized head of steam at 80% efficiency; VERTICAL PRESS provides self-alignment of molds, fast mold changing; CONTROL CENTER integrates each operation into a fully-automatic system with independently variable time cycles.

EXPANDEX OFFERS PRODUCT DESIGN, PILOT RUNS, ENGI-NEERED INSTALLATION AND SERVICE . . . a complete unit service that includes everything you need from start to finish to be a custom molder or to produce items in your plant for your own use. Expandex experience, gained from the operation of its own custom molding service and the design and manufacture of its own equipment, assures success to purchasers of this complete service.

> EXPANDEX OFFERS TO SELL FINISHED PRODUCTS OF EX-PANDABLE POLYSTYRENE, CUSTOM DESIGNED AND MOLDED TO YOUR SPECIFICATIONS. This service includes full analysis of your package needs by the Expandex design staff, a group combining the talent and experience needed to assure maximum application of the advantages of this material; and high volume, high quality production from the latest Expandex automatic molding systems.

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Company Address SEND FOR FULL DETAILS

LOW-COST automatic molding SYSTEM

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EXPANDEX

Equipment & Materials | Cont'd from page 248|

endered film, the company reports. In operation, a circular knife cuts through a roll of material (including hard and soft spots) mounted on a stationary shaft. Cutting is done without rewinding. Rolls can be cut to various widths, in Incin increments. Oscar I. Judelshon, Inc., 404 Tonnele Ave., Jersey City 6.

New line of steel shipping drums

Skolnik Drum Co., formerly a reconditioner of steel drums, now has expanded its operations and is producing a new line of steel shipping containers. These items will be exhibited at the Packaging Show this month. The supplier is offering open-head and closed-head steel drums in a wide range of sizes. The drums are available with a variety of corrosion-resistant interior linings, including lacquer, phenolic, modified epoxy and vinyl, to meet varying product requirements, Skolnik Drum Co., 4000 II. 48 St., Chicago.

One-hand tape dispenser

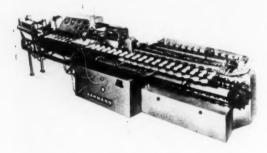
A lightweight transfer-tape dispenser that can be operated with one hand is being marketed by Permacel. The 4DF dispenser is 15 in. long. In operation, as the dispenser is pulled along a container surface it removes the tape interliner and applies the tape (which is fed from a roll, in widths up to 1 in.). A trigger mechanism on the dispenser enables the operator to cut the tape at any desired length, leaving an exposed tab to provide a start for the next strip. A special silicone rubber wipedown roller on the dispenser automatically presses the tape firmly to the surface (glass, boxboard, plastic, metal or wood) and, says the supplier, provides excellent release characteristics. This new dispenser can be seen at the Packaging Show this month. Permacel, New Brunswick, N.J.

Container-vibrating unit

A compact, lightweight container-vibrating machine is among the new equipment being displayed at the Packaging Show this month by George H. Fry Co. The unit (30 in long by 18 in. wide) accommodates bags, cartons and other packages. It vibrates the filled container to settle its contents before the package travels to the closing station. Vibrating speed is adjustable to accommodate varying types of products, according to the supplier. George H. Fry Co., 42 E. Second St., Mineola, V.Y.

Printer for plastic containers

Polyethylene bottles and other plastic containers can be printed, at reportedly high speeds, on a new automatic silk-screen printing machine developed by Werner Kammann



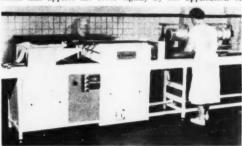
Machine Works, a German company. The new unit is being displayed at the Packaging Show this month by its distributor, Pan Industrial Corp. In machine operation, magazine-fed plastic containers are conveyed horizontally to a printing station, where an automatic device accurately registers multicolor prints. The printed bottles then are conveyed automatically to a drying station, after which they are discharged to an outfeed conveyor. Pan Industrial Corp., 38 W. 21 St., New York 10.

Short- or long-run blister packaging

A new automatic vacuum-forming machine designed for short- and long-run blister-packaging and other thermoforming operations will be shown by Plast-O-Craft at the Packaging Show this month. Identified as Model 400A, the machine may be sheet fed or roll fed and handles polyethylene, polystyrene, acetate, butyrate, extruded acrylics and other thermoplastics materials. Plast-O-Craft Corp., 391 Mulberry St., Newark.

Shrink film and packaging machine

Cryovac has developed a shrinkable-polyethylene cover for aluminum-foil baked-goods pans and a conveyorized machine that applies the cover tightly by the application of



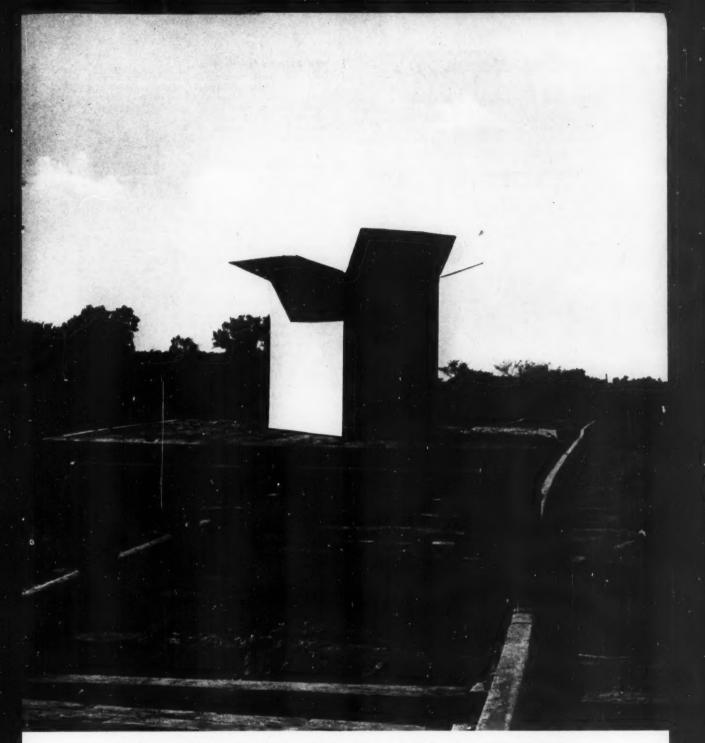
heat. Containers utilizing this shrink-film cover are being offered by a major aluminum supplier (see p. 72, this issue). Cryovac reports that the new film-foil bakery container affords substantial savings in packaging labor and time, a 40% saving in wrapping material, and a package with exceptional shelf appeal. The film, called Cryovac L. is an irradiated polyethylene whose characteristics are reported to include: toughness, exceptional clarity, shrink energy, high tensile strength, long shelf life, printability and excellent moisture protection for freezer storage. The film cover can be snapped back on the container after first removal for protection of the unused contents, says the supplier. The new packaging machine (Cryovac SCM-IV) is a straight-line unit consisting of one or two dispensing stations, a conveyor and two shrink tunnels. After the film (roll fed in widths up to 11 in.) is manually draped over the filled pan, the conveyor carries the container to the first tunnel, where a blast of hot air shrinks the film around the lip of the pan. In the second tunnel, hot air shrinks the film further, forming a tight, smooth cover. The Cryotae Co., Dir. W. R. Grace & Co., Cambridge 10, Mass.

Portable vacuum-packaging machine

A portable aluminum-frame vacuum-packaging machine weighing 150 lbs. and measuring 25 by 33 by 49 in, is available from MfP Co. The machine seals products weighing up to 35 lbs. in a skin package consisting of thermoplastic film and corrugated board. Items to be packaged can range in size up to 13 by 17 by 6 in. Maximum platen size is 14 by 18 in. The Poly-Tite 500-B, as the machine is called, has made an initial impact on the moving industry for vacuum packaging of dishes, glassware, bric-a-brac and other fragile houseware items. The skin packs then are loaded into the moving van for transport. According to the company, use of the machine for this purpose cuts loss of small items, substantially reduces damage, eliminates the need for shredded or wadded paper cushioning, and makes more efficient use of van storage space. The process is reportedly so economical that there is no added cost to the mover's customers. In addition to its use in the moving industry, the new machine is suggested for the commercial protective packaging of a wide variety of fragile products. MiP Co., div. Avery Industries, San Mateo, Calif.

Reinforced easy-open box tape

Developed for use with end-loading shipping containers is Gummed Products' Ziploc reinforced gummed box tape. The tape is constructed of two 26-lb. kraft liners, striplaminated, with three rayon strands bonded lengthwise in the adhesive coat. The strip lamination provides an air cell



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Don't be surprised if you see Hoerner boxes whisking through the countryside on a handcar. It's just Hoerner's way of beating a deadline. Hoerner will go to any extreme to uphold their reputation for dependability and for delivery on time. So, if you see a Chinese junk blowing up the James River, you'll

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Equipment & Materials | Continued |

between the two plies of liner, for added shock resistance. The rayon strands act as a tearing agent for easy carton opening without tape breakage. With this easy-opening feature, says the supplier, end-loading shippers can be converted into double-tray or top-opening display containers. Gummed Products Co., sub. St. Regis Paper Co., Troy, O.

Plastic carry container for 'problem' liquids

New being marketed in the U.S. by Dillon-Beck is the Scepterene Jerry Jug, a blow-molded plastic container for such liquid products as gasoline, naphtha, kerosene, solvents, inks, acids, oils and heavy detergents. Already in use in Canada (for motor oil), the corrosion-resistant con-



tainer is molded of a special combination of high-density polyethylene and additives and is said to be unbreakable. A carry handle is molded in, as are measure markings. The plastic container is available in I-gal, and 212-gal, sizes, in red, yellow and natural white colors. A molded-in finger grip on the bottom of the container facilitates handling during pouring. A convenience feature of the lightweight and rustproof container (as illustrated in the accompanying photograph) is its combination cap and pour spout, which also acts as a measuring cup. This three-piece closure unit (screw-type open-top overcap, pour spout and spout cap) is quickly assembled for pouring use. During shipping and in storage of the unused contents, the pour spout is reversed, extending downward into the container with its flanged bottom edge resting against the lip of the jug's threaded neck, the plug-type spout cap is slipped into the bottom of the spout, and the overcap is replaced. For additional data, contact Dillon-Beck Mtg. Co., Hillside, V.J.

Molded-pulp produce trays

Diamond National's molded-packaging division has introduced two new molded-pulp trays for consumer-unit packaging of fruit and produce. The company's #0 tray (63₁ by 55₈ in.) holds four large-size fruit, while the larger #5 tray (111₈ in. by 51₁ in.) holds 8 to 10 medium-size fruit. The two new trays have been added to the supplier's "Fruit-Shel" line. Diamond reports that its addition of the two trays now provides customers with a produce tray for every variety and count. The molded-pulp trays are ideally suited for use with shrink-film overwraps, says the sapplier. Diamond National Corp., 122 E. 42 St., New York 17.

Decorative packaging papers

Rayz-Brite is Embossograph Process Co.'s name for a new line of raised and sparkle-design papers designed for specialty and gift packaging applications. The supplier says that these papers are the result of developments in machinery and techniques that make it possible to thermograph the designs on continuous rolls of paper. The papers are available in two lines: Consort and Royalty (the latter is the supplier's "de luxe" line). Each consists of 10 designs, each of which includes up to 17 different combinations of paper color and decorative material, Decorations include metallies and raised powders. Embossograph Process Co., Inc., 3720 14th Ave., Brooklyn 18.

Spiral-wound foil-fibre can

Designed for use by packagers of frozen juice concentrates is Anaconda Aluminum's multi-ply foil-fibre can with metal ends. The 6-oz. can's body consists of an inner liner of

coated aluminum foil, a wall of spiral-wound fibre-board and an outer printed layer of foil. According to the supplier, the composite can offers material-cost savings of 20% compared with a 6-oz, tinplate can and 14% compared with an aluminum can with tinplate ends.



Significant freight-cost savings also can be achieved by adoption of the foil-fibre can, says the company. All components of the can, which can be opened by conventional methods, are spiral wound into a tube from which the container is cut. The inner foil liner is constructed with a specially designed folded lap seam that is reported to effect a tight seal for added assurance of product freshness. Anaconda Aluminum Co., 1130 S. 13 St., Louistille 1.

Bag maker and polystyrene sealer

Two new packaging-machinery items from Schjeldahl are the Model 108-SP film bag-making machine and the Polystyrene Package Sealer. The bag maker, available in 41and 56-in. models, is reported to operate at speeds in excess of 120 cycles per minute. It is claimed to combine economy with accurate conversion of printed or unprinted polyethylene film. Twin rack controls enable two separate lengths of material to be drawn. The supplier's new polystyrene sealer operates with semi-rigid trays and lids, and is designed for use in supermarket packaging of poultry, meats, salads, soft goods and other products. According to the company, the machine does not melt or de-orient the plastic and forms shockproof, crackproof seals on polystyrene. The seal is so effective, says the supplier; that shelf life of refrigerated products reaches up to 22 days. The machine is reported to operate at speeds up to 13 sealed packages per minute. G. T. Schjeldahl Co., Northfield, Mass.

Collapsible polyethylene 5-gal. jug

Liquids of virtually any type can be transported and stored more efficiently and economically in a new collapsible polyethylene 5-gal, jug, reports Associated Plastics,

supplier of the ene container. The new blow-molded Flex · O · Boy jug is said to be corrosion resistant and shatterproof. It features a rigid, threaded neck with a screw closure, to facilitate filling and dispensing, The collapsible container is marketed in a corrugated carton, with its neck and closure prothereby truding. providing it with



the necessary rigidity for handling in the plant and at the point of use. According to the supplier, the empty plastic jugs take up only one-third the storage space required by conventional metal or glass containers. U. S. Industrial Chemicals' Petrothene resin is used to make the container, Associated Plastics, Inc., 1510 University Rd., Cleivland 13.

Automatic imprinter for milk cartons

An automatic imprinting attachment that applies dates, codes and prices to the tops of milk or beverage containers during the filling operation has been introduced by Gotts-

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THE PRODUCT



1. SELFTAK LATEX CARD & BLISTER manufactured for Leviton Manufacturing Co., Inc., Brooklyn, N. Y.





2. SKIN PACK BOARD manufactured for Penn-Akron Corp., Woodside, N. Y.



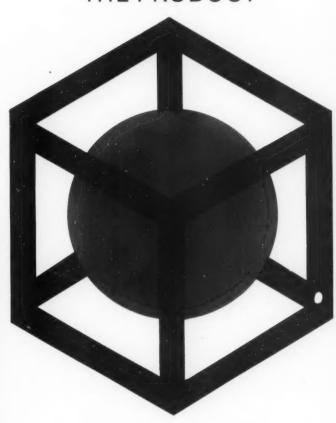


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Backed by 10 years of Packaging Leadership and "Know How", we at IDEAL design and completely manufacture IMPULSE CARDS and BLISTERS that really solve your selling problems. Whether the need be for • SELFTAK CARDS and BLISTERS • HEAT SEAL CARDS and BLISTERS • SKIN PACK-BOARD, IDEAL packages will increase your SALES.

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Automatically Labels a Variety of Round Containers



FASTER, EASIER, and at a LOWER COST

New Labelette with Automatic Electronic Feeder

- New unit automatically feeds, handles and places labels of various lengths onto round containers.
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- Auxiliary manual feed unit for special labeling applications.
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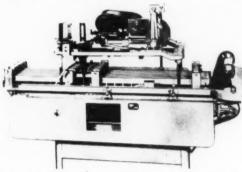
JIFFY MANUFACTURING COMPANY 360 Florence Avenue, Hillside, New Jersey

Equipment & Materials [Continued]

cho. The imprinter is designed specifically for attachment to "Canco" milk carton machines made by American Can Co. Imprints can be located ar; where on the carton top and are made as the stack of cartons travels down the vertical food track, the supplier reports. The imprinter is a small, fully enclosed unit that uses instant-drying flexographic ink designed to adhere to waxed or other coated surfaces. Date, code or price data can be quickly changed, according to the company. Adolph Gottscho, Inc., Hillside 5, N. J.

Filler for flat oval bottles

A six-cylinder automatic filling machine, specifically designed for handling 1½-oz. flat oval bottles, has been de-



veloped by Elgin. The straight-line unit accommodates liquid and semi-liquid products. It is claimed to give packers the benefits of easy handling and exact control of the small bottles throughout the production run. Employing variable-speed drive with adjustable fill attachment, the machine moves six rows of containers at a time along a stainless-steel bar indexing table with a special double-lift station for purging and filling. Elgin Mig. Co., Elgin, Ill.

Hand-operated embossing tool

The Dyno Mite Tapewriter is a hand-operated embossing tool designed for making on-the-spot white raised letter-and-number finished labels on colored vinyl tapes. Both tool and tapes are available from Dyno Industries. Letters or numbers to be used on the label are selected on a dial which is incorporated into the labeling tool. The tapes come in a wide variety of colors, for coding and decorative purposes, and are available with or without adhesive backing. Dyno Industries, Inc., Berkeley 10, Calit.

Wrapping machine and film offer

Kordite that it is now offering a new bagmaking and product-packaging program to manufacturers of products adaptable to flexible film packaging. Six models of Kordite packaging machines, like the vertical form-fillseal unit illustrated, plus a wide variety of polyethylene film gauges, are available from the sup-



plier. The machine-and-film combination includes facilities for slit-polyethylene tubing, garment-film tubing and shrinkable polyethylene for skin-tight packaging. Kordite Co., Div. National Distillers & Chemical Corp., Macedon, N.Y. traflex ce, entraflex ce, entraflex ce, centraflex ce, x centraflex ce ex centraflex ce lex centraflex flex centrafle flex centrafle flex centraf

Dover.

Manufacturing Plants in



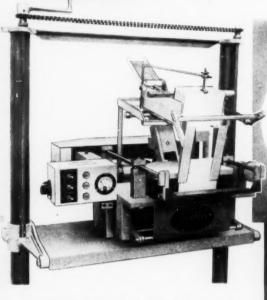


rinter flexoprinter flexoprinter

Find out how much it's costing you <u>not</u> to use a KIDDER CENTRAFLEX*. Investigate the up-to-theminute features that are built into this new 6-color Flexographic press... to eliminate the cost of buying them later. Learn how you are Profit Protected by Kidder Performance Engineers... who assure consistently high output with every Kidder unit, from installation on. For details contact Kidder Press Company, Inc.

Doughboy

Automatic Jaw Sealer-Labeler



Featuring an Efficient. Positive Coder-Imprinter

The coder-imprinter on the Model JSL solves a problem that has plagued the industry for years. Every label is imprinted without a miss. Every imprint is sharp and clear. There is no pile up of ink, no smear, no offset. Labels applied and imprinted with the JSL add to the attractiveness of the package.

The Doughboy Model JSL is designed to seal, imprint, punch holes or to code by embossing all in one process. It handles each operation efficiently, neatly and economically.

In addition to your inquiry on the Model JSL we invite your request for engineering information on a complete Doughboy System for solving your individual conveying, sealing and packaging problems.

Ask Doughboy Customers

William S. Barry of the Bloomer Candy Company, Zanesville, Ohio, says, "We are proud of the neatness and sales appeal this machine gives our bags, but of greater emphasis is the faster production we have achieved by its outstanding performance.

"By using the JSL in conjunction with your Model DB2 Double Belt Conveyor . . . it is possible for us to maintain an average output of 25 to 28 sealed bags per minute. We are confident this will result in a sizable labor savings."



IT IMPRINTS INGREDIENTS

The JSL coder-imprinter is ideal for printing lists of ingredients or other vital information. Even lists that require several lines of type are imprinted clearly.



IT CODES AND DATES

Coding and dating are important in the food and candy fields where the manufacturer, the wholesaler and the dealer must be concerned with the movement of fresh merchandise to the consumer.

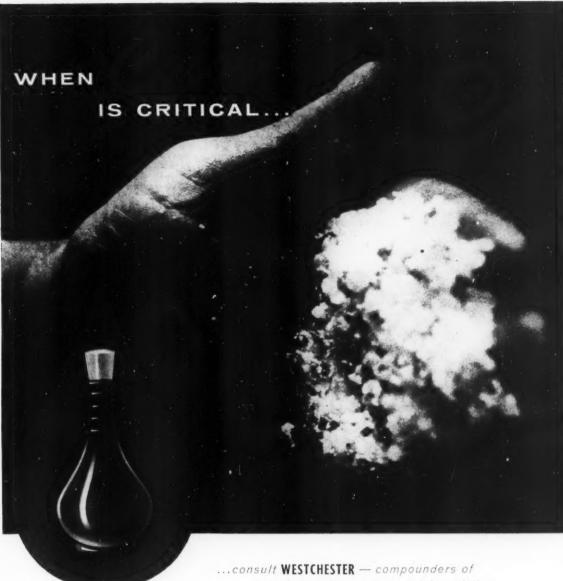


The JSL coder-imprinter enables many manufacturers to simplify their labeling problems by using a standard label and imprinting these labels with trade names, product names, or weights as the packages are sealed.

DOUGHBOY INDUSTRIES, INC.

Mechanical Division

New Richmond, Wisconsin



polyolefin colors and special formulations

EXPERIENCED HANDS at Westchester guide your order through production. Every color formulation is scientifically tested for uniform dispersion, stability, desirable temperature, flow characteristics . . . and resistance to degradation, migration and leaching

For detailed information — backed by 14 years of service to the thermoplastics industry - consult Westchester about any color or formulating problem involving polyolefins.

The new FDA certified Westchester colors are now available. Approved for food, drug and cosmetic packaging - These colors are supplied with a registration number, attesting FDA approval of the pigments!



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INFORMATION

At the recent convention of the National Canners Assn., John C. Hemingway was elected pres. to succeed Milan D. Smith, who will become exec, v.p. and secy. on Sept. 1. Robert C. Cosgrove was elected v.p. and Carlos Campbell continues as executive head of NCA until his retirement, at which time Mr. Smith will succeed him. Mr. Campbell has served as exec, secy. of the organization since 1945. NCA also has appointed 23 new directors.

Ways to increase net profits in supermarkets were discussed at the *10th anniversary convention of the American Rack Merchandisers Institute, held at the Shelton Towers, Chicago, Jan. 14. A sample show of some 6,000 non-food items for supermarket sale was included in the convention. ARMI emphasized the point that net profit on non-food items is substantially higher than that on food items.

An eight-page, illustrated career-guidance brochure, "Plastics as an Engineering Career," has been issued by the Society of Plastics Engineers. It includes descriptions of plastics mateterials, the plastics industry as a whole and the role of the engineer in the industry. Covered also are the training of the plastics engineer and job opportunities after college. The brochure is obtainable without charge from SPE, 65 Prospect St., Stamford, Conn.

IPACK '61, a biennial international packaging exhibition, will be held June 20:29 at the Milan Fairgrounds under the sponsorship of the Italian Packaging Institute. Machinery for the foodstuffs and confectionery industries will be shown, along with a mechanical-handling exposition. Further information may be obtained from IPACK, Viat Lanzone, 4, Milan.

The Business & Defense Services Administration of the U. S. Dept. of Commerce has released year-end reports and 1961 forecasts on various supplier industries in the packaging field. According to BDSA, the output of folding boxboard last year rose 2.9% and value

of shipments 0.1%. 1961 shipments are expected to approach 1960 volume. Consumption of aluminum foil for packaging in 1960 was about 240 million pounds, a 4-million-pound gain from 1959. The demand for glass containers in 1960 was 159 million gross, a 4% increase over 1959. The volume of metal can shipments is reported to be down 2-3% from 1959's record high but 1961 shipments are expected to approximate the 1959 total. Shipments of steel drums and pails declined about 10% in 1960 from 1959, according to BDSA, with no increase in sight for 1961, in spite of gains in lighter-weight containers. Production of fibre boxes in 1960 was 2% below the 1959 record, although the value of sales remained constant, says BDSA. Copies of these pamphlets may be obtained from the Containers & Packages Div., Business & Defense Services Administration, U. S. Dept. of Commerce, Washington 25, D. C.

At the annual meeting of the National Flexible Packaging Assn., held in Chicago, March 1-3, new officers and directors were announced. NFPA pres. is H. N. Brush, Munson Bag Co.; Exec. v.p. is E. F. Burke, Standard Packaging Corp., and seey, and managing director is John M. Cowan.

Chicago's Drake Hotel was the scene of the annual meeting of the Folding Paper Box Assn. of America, March 20-23. Preceding the opening session were seminars on "A Profits Improvement Program—Cost Reduction." Announcement of the "100 hest cartons of the year" were made and all entries in the competition were exhibited on the final day (see "Folding Box Winners for '61," this issue, p. 173). FPBAA reported during the meeting that 1960 shipments of folding boxes reached a total of \$941 million.

At the mid-year conference of the Supermarket Institute, held at Bal Harbour, Fla., on Jan. 30. Curt Kornblau (SMI research director) reported that sales in supermarkets opened last year averaged \$36,900 a week, 3% below the 1959 figure. This figure was, however, 5% above that of the 1958 economic slowdown, Mr. Kornblau said.

MACROPAK 1961, an international packaging and materials handling exhibition sponsored by N. V. 't Raedthuys of Amsterdam, will run May 2-9 at the RAI exhibition halls. This is the sixth biennial show held there since 1948. For information write N. V. 't Raedthuys, Tesselschadestraat 5, Amsterdam-W, Netherlands.

"New Plastics for the Packaging Industry" and current developments in compliance interpretations with the







MODERN PACKAGING covers win art awards

Once again, Modern Packaging's cover illustrations have been cited for excellence. The latest honor is the selection by the Art Directors Club of New York of two covers in the Great Packaging Discoveries series of 1960. Out of more than 14,000 entries in the Club's 40th Annual National Exhibition of Advertising and Editorial Art and Design, the judges selected the October 1960 (The Crown Cap) and November 1960 (The Volatile Corrosion Inhibitors) covers of Modern Packaging for the exhibition and for reproduction in the 40th Art Directors Annual. The exhibit of winners is being held at the Pepsi-Cola Building, 500 Park Avenue, from March 21 to 30. The Modern Packaging awards were presented to Roy Kuhlman, nationally known designer of the 1960 series, and Donald R. Ruther, art director, at a New York luncheon March 21. Previous Modern Packaging covers have won several awards in similar art and editorial competitions.

Sales Come Alive

with new

Western-Waxide Five



Food needs robust packaging to sell on today's crowded shelves. Here are five new ways major food producers are using Western-Waxide packages to keep sales healthy and growing. For complete details on any or all of the packages shown, write: Warren Townsend, 2101 Williams Street, San Leandro, California.

FRITOS* CORN CHIPS POUCH: New method of pouch packaging replaces bags ... offers lower production costs.

CHET'S BOILABLE POUCH: This gleaming aluminum pouch for prepared frozen foods needs no carton or overwrap. The crisp four-color printing resists boiling water.

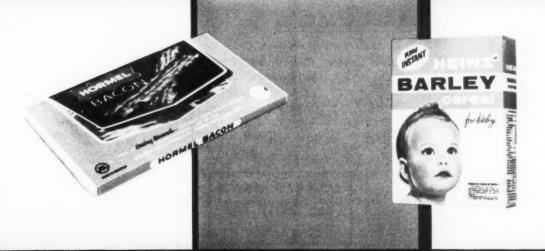
H. J. HEINZ BABY CEREAL OVERWRAP: Six-color rotogravure printing makes this Western-Waxide wrapper sparkle with eye appeal—color coding identifies varieties. Machine overwrapped from roll stock.

HORMEL BACON PACKAGE: The semi-rigid five-color Mullinix Peek-A-Boo® package keeps displays neater and bacon fresher. The flap provides light protection, strong visual impact, and allows shoppers to inspect the contents.

REAL FRESH MILK, INC.: New low cost, paper / foil / polyethylene laminated Tetra Pak package protects whole sterile milk against contamination – without refrigeration.

Fritos is a registered trademark of The Frito Compa







CROWN ZELLERBACH

WESTERN-WAXIDE DIVISION

Plants and sales offices in principal cities throughout the United States
Headquarters, 2101 Williams Street, San Leandro, California
In Canada address product inquiries to Crown Zellerbach Ltd., Vancouver, B.C.

BLISTER PACKAGING FACTS!

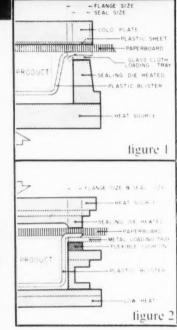
XSealing through the blister

(figure 1) boils out the plasticizer making blister flange weak, thinner, distorted and brittle. Wide flange is required because seal must be kept away from blister, or heat will cause deformed blister. Only narrow portion of flange can be sealed, producing unsightly seal which reduces package effectiveness.

Tronomatic BlisTpak seals through the package card

(figure 2)...permits use of narrow flange and sealing close to product without blister distortion. Flange thickness is pressed firmly into the

paperboard fibers for flush flange surface. Material waste is reduced, package is strong, warp-free and attractive.



For high rate of production

BlisTpak models are available with a production capacity of up to 80,000 packages per 8-hour day at the lowest labor cost per package. Other Tronomatic sealers are available to meet specific production requirements.

> AT THE A.M. A. PACKAGING SHOW SEE BOOTH 203

(Chicago, III. April 10-13)



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Manufacturers of plastic forming, molding, fabricating, sealing and cutting equipment

F.Y.I. [Continued]

Food Additives Amendment were featured topics of a Jan. 27 meeting sponsored by the National Fibre Can and Tube Assn., held at the Hotel Astor in New York City

Dr. Gordon M. Kline, chief of the Div of Organic & Fibrous Materials of the National Bureau of Standards, was gen, chairman of the 17th annual technical conference of the Society of Plasties Engineers held Jan. 24-27 at the Shoreham Hotel in Washington, D. C. New information on the use of plastics for such varied purposes as electrical appliances, rockets and space environment were reported at the meeting. Dr. Kline is also technical editor of Modern Plastics magazine

one-day containerization conference was sponsored by the Bulk Packaging & Containerization Institute at the Statler-Hilton Hotel, New York, on Ian. 19. This was the first open meeting of the new organization, whose objective is to collect and disseminate in formation related to bulk packaging, transportation and marketing of indus trial and agricultural products.

In a presentation before the 52nd An nual Meeting of the Grocery Mfrs. of America, held Oct. 25 in New York. Nielsen Co., J. O. Peckham, A. C. [Continued on page 265]

Apr. 4-6 Research & Development Associates, 15th annual meeting, Hotel John Marshall, Richmond, Va.

10-13 American Management Assn., Packaging Show, McCormick Place, Chicago.

Apr. 20-21 Society of the Plastics Industry, 18th annual Western Section Hotel del Corenado. conference, Coronado, Calif.

May 2-1 Lithographers & Printers National Assn., 56th annual convention, Arizona Biltmore Hotel, Phoe

May 2-9 MACROPAK 1961, international packaging & materials han dling exhibition, Amsterdam, Nether lands.

May 4-7 National Paper Box Mfrs. annual meeting. Mayflower Hotel, Washington, D. C.

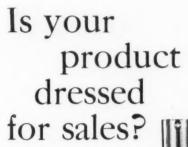
May 7-10 24th annual convention, Super Market Institute, McCormick Place, Chicago,

May 12-13- Michigan State University Packaging Society, third annual packaging exposition, School of Packaging, East Lansing, Mich.

May 14-16 National Fibre Can & Tube Assn., 28th annual meeting, Francis Marion Hotel, Charleston,

May 15-17—Chemical Specialties Mfrs. Assn., 47th mid-year meeting. Drake Hotel, Chicago.

May 22-24 American Management Assn., orientation seminar on package marketing research, Astor Hotel, New York.





























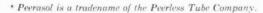
As you know, in today's market, your product must be smartly dressed and up-to-the-minute, for maximum sales appeal at the point-of-purchase.

Peerasol* is the distinctive, seamless, aluminum aerosol container that is being chosen by drug, cosmetic, pharmaceutical and specialty product manufacturers to meet a growing consumer demand for smaller pocket and purse size aerosols. It is the only aluminum aerosol container with a patented neck for a leak proof valve-cup fit. This feature, combined with the extruded one-piece construction, makes a container you can market with confidence. Peerasol containers can be handsomely lithographed in two, three, or four colors over a base coat, and come in capacities ranging from one-half to four ounces.

Peerasol is another development of the Peerless Tube Company, a pioneer in the manufacture of collapsible metal tubes as a package for commercial use.

For complete information about Peerasol containers, write or call-

PEERLESS TUBE COMPANY, Bloomfield, N. J.



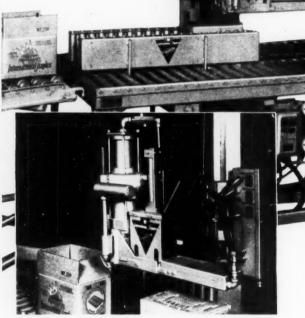


New!

SEE
INTERNATIONAL STAPLER
EXHIBIT
BOOTHS 720-721
AMA PACKAGING SHOW

International Space-Saver Dual Stapler

holds 10,000 staples!



5,000 Capacity Magazine. The unique semi-flat staples (leg angle to crown only 15°) nest when stacked, eliminating all of the waste space necessarily part of a conventional staple magazine. The patented forming die shapes the staples to 90° driving angle prior to their being driven and clinched in the carton flaps. Forming and driving operations are performed automatically, in the same stroke of the stapling head. Top and bottom stapling heads contain 5000 staples each.

Close 1250-2500 Cartons Without Reloading

A new patented semi-flat staple and specially designed stapling head give top production line efficiency to your carton closing operations. This advanced system means: 1) efficient use of labor 2) increase in production 3) centralized packaging department 4) neatly, sturdily closed cartons. Here is a modern, dollar-saving packaging method.

Stapling top and bottom of carton simultaneously, the Space-Saver Dual can operate for several hours without reloading.

Call or write for literature on the Space Saver Dual Stapler



International Staplers

INTERNATIONAL STAPLE & MACHINE COMPANY

Originators of Carton Closing Staplers
P. O. BOX 270

HERRIN, ILLINOIS

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MARKING EQUIPMENT FOR THE PACKAGING INDUSTRY





BOT-M-CODER

Used for code dating container bottoms — aerosols, cans, jars, bottles ...speeds up to 400 containers per minute.

MICRO-PRINTER

Versatile machine, adaptable to conveyors, cartoners, sealers, etc.; friction or power drive. 50 models available.





MICRO-CODER

Easily installed on all kinds of packaging or processing equipment. Imprints top, bottom or sides of wide range of packaging sizes and materials.

Also available:

SIDE PRINTERS

TOP-N-BOTTOM CODERS
INK & TYPE FOR ALL MODELS

Inquiries invited for custom models to meet your specifications.

COZZONE MARKING CO., INC.

18 Nuttman St., Newark 1, N. J.
Precision Equipment for
Nearly Half a Century

F.Y.I. [Continued from page 262]

examined some of the trends of "consumer voting in the marketplace." Among the significant trends noted was a 39% increase in sales of convenience products during 1960. In the same period, he said, total store sales increased only 4%.

The semi-annual meeting of the European Packaging Federation, Vienna, April 29, will be the occasion for several packaging events sponsored by the Austrian Packaging Center (Federal Chamber of Commerce) and the Austrian Institute of Packaging. The meeting of EPF will be sponsored by the Federal Ministry of Trade & Reconstruction. Further information may be obtained from the Austrian Institute of Packaging, Franz Klein Gasse 1, Vienna, Austria.

A new board member and new committee chairmen were named at the Jan. 25 meeting of the board of directors of Packaging Machinery Manufacturers Institute in New York. Elected to the board was W. A. Heyard, Woodman Co., Decatur, Ga. Among the committee chairmen named were: 1961 Show Committee, W. W. Anthony, Crompton & Knowles Packaging Corp.; Survey Committee, E. L. Kuhn, Consolidated Packaging Machinery Corp.; Membership Committee, W. R. Huguenin, FMC Stokes & Smith; Directory Committee, Eugene E. Lakso, Lakso Co.; Annual Meeting, George L. N. Meyer, Jr., Economic Machinery Co., and Meeting Program Planning, L. R. Muskat, Triangle Package Machinery.

The Michigan State University School of Packaging will hold its third annual Packaging Exposition on May 12 and 13 at the university's south campus, E. Lansing, Mich. The exposition is designed to acquaint the industry with the work and research being done in the school, to interest other students in packaging as a career. For details, contact Michigan State University Packaging Society, E. Lansing.

Aerosols: Science and Technology, a new book from Interscience Publishers and edited by H. R. Shepherd of Aerosol Techniques, is a 562-page survey of industrial and technological developments in the pressure-packaging industry. The book, which is available from the publisher at \$22.50, is the result of the collaboration of 19 aerosol specialists. Contact Interscience Publishers, 250 Fifth Ave, New York 1.

E. I. Du Pont De Nemours & Co. is sponsoring a candy-industry design project in cooperation with three leading design schools. Carnegie Institute of Technology, Illinois Institute of Technology, and the Philadelphia Museum College of Art are participating in the program. Under the program, students are investigating materials, packaging methods, marketing problems and existing packages before developing their own designs.



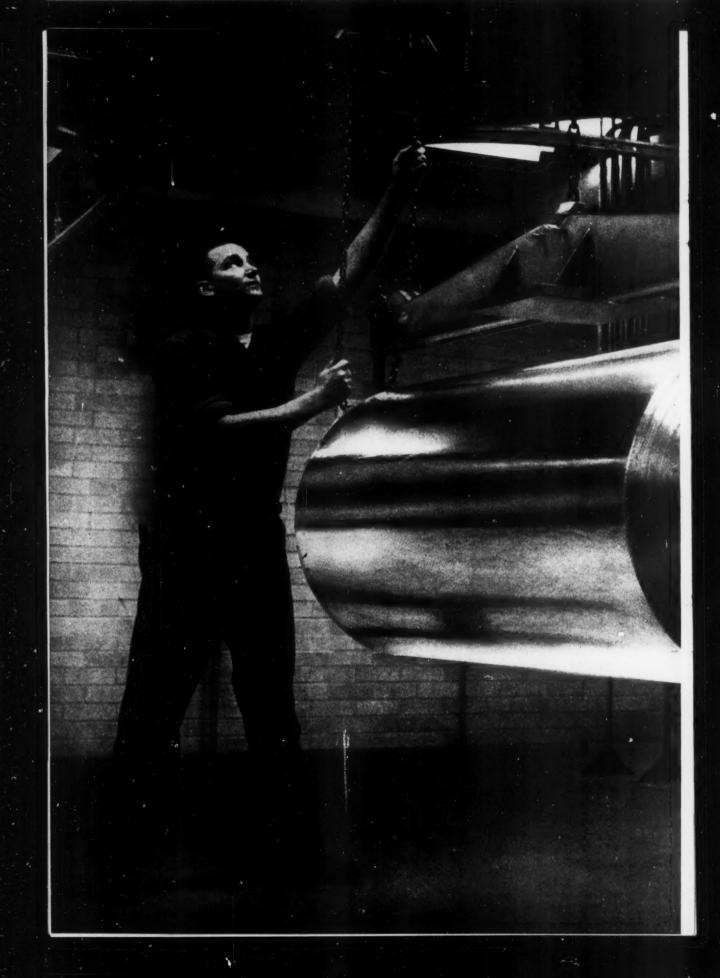
IMS Silicone Spray is specially designed to eliminate sticking problems in the molding, food and packaging fields and even in the home. Being non-toxic, it is now used widely by the dental profession, the baking industry and by bowling alleys as a release for pin setters. Try a can today and compare the fast acting all-metal valve with many other cans using cheaper spray heads. Remember to look for your FREE BONUS card in every box... only IMS brings you this money saving offer. Keep a few cans handy and your sticking problems are over!

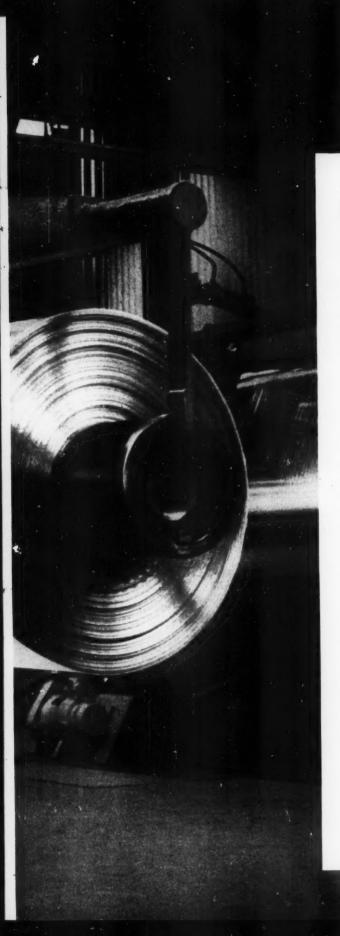
PRICES: \$ 2.00 Per Sample Can \$ 18.00 Per Unbroken Dozen \$197.40 Per Unbroken Grass

Still lower prices on larger orders shipped in one gross lots on any schedule you request.

INJECTION MOLDERS SUPPLY CO. INC.

17601 So. Miles Rd. Cleveland 28, Ohio





Du Pont cellophane makes news...

9 new cellophanes since the 1960 Packaging Show!

Still more cellophanes from Du Pont research—to meet new, ever-changing packaging needs. Today, packagers can choose from over 100 Du Pont cellophanes. Each one is sparkling-clear. Each one prints beautifully. Each one gives maximum efficiency. Yet there are important differences. Some are moistureproof. Others are not. Some lock air out. One actually "breathes". Another makes extra-tough bags. Many are ideal substrates.

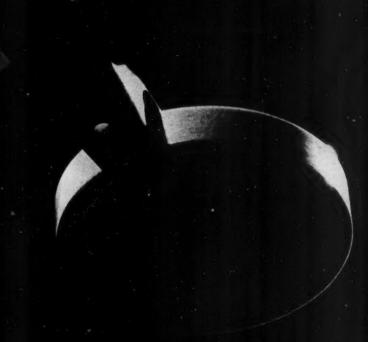
The point is: Du Pont cellophane is many, many films. Different coatings give different properties, make each cellophane a different film. Right now there are over 100. And we have many more in the works.

Have you checked lately? There's a good chance you'll find a special Du Pont cellophane that will give you better, faster-selling packaging at lower cost. Call your Du Pont Representative or Authorized Converter. Du Pont Co., Film Dept., Wilmington 98, Del.





BETTER THINGS FOR BETTER LIVING ... THROUGH CHEMISTRY



STRAPPING TAPE, available in a full range of fensile and impact strengths, applied with a versatile STRAP IT dispenser. For carton sealing bundling, palletizing, reinforcing whatever the packaging application.

PERMACEL

NEW BRUNSWICK, NEW JERSEY . TAPES . ELECTRICAL INSULATING MATERIALS . ADHESIVES

first in Pouch Packaging announces the

STOKESWRAP "1000"

the completely new pouch-forming, filling and sealing machine with almost unbelievable versatility!

From FMC—who introduced pouch-packaging equipment and developed Stokeswrap, the standard of the industry — now comes the new "1000," a double-tube machine with all the advantages of two single-tube machines, but at less cost. The many new design features of the "1000" give the equipment an amazing flexibility that makes it ideal for large and small plants alike.

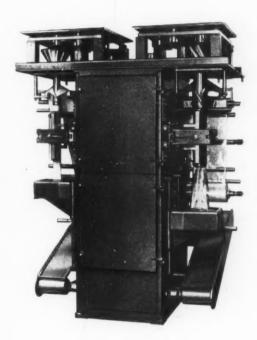
In addition to including all the proven Stokeswrap features for packaging free-flowing products such as frozen foods or candies, the "1000" has been designed to be the most versatile pouch-making machine available.

The amazing versatility of the "1000" is due to the separate drives that make it possible to operate either of the two tubes independently of the other.

The "1000" can simultaneously . . . run two different types of film . . . in two different sizes . . . with two different products . . . by means of two different feeds . . . with two different types of sealing method . . and two different types of pouch . . . at two different speeds.

Further, production is continuous. If one side is shut down for changeover or maintenance, the other side continues to operate. And the "1000" can be purchased as a single-tube unit and the second tube added later, all at less cost than separate units.

PLUS ALL THESE FEATURES—Speeds up to 150 packages per minute. Sizes from 2'' x 3'' up to 8'' x $14\frac{1}{2}''$ (with 200 cu. in. of product). New plug-in sealing mechanisms for quick change of sealing method. Side-mounted filling tubes and web rolls for easy "threading" and accessibility to moving parts. Practically every type of heatsealable film, paper, foil or laminate. Quickly adjustable volumetric pocket capacities. Much less floorspace than two single-tube units. Waterproof filling mechanism for steam cleaning and washing down. And all with complete flexibility of operation.



See the new Stokeswrap "1000" in operation at the AMA Packaging Show in Chicago, April 10 to 13, Booths 827-831



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PATENTS DIGEST

This digest includes each month a brief summary of the more important current patents which are of special interest to all packagers.* Edited by H. A. Levey.

Container-Forming Machine, John G. Vergobbi (to Pneumatic Scale Corp., Quincy, Mass., a corporation of Massachusetts). U.S. 2,966,832, Jan. 3. In a container-forming machine of the character described, in combination; a forming block about which a blank of lining material may be wrapped to form a lining bag, means for folding the blank about three sides of the block, leaving extended marginal portions.

Heading Machine for Forming Containers, Norman A. Leibreich (to The Mead Corp., Dayton, a corporation of Ohio). U.S. 2,966,833, Jan. 3. A machine for heading tubular drums, comprising a form on which a tubular length is placed for being supported and a vertically movable presser member for bending inwardly the projecting end of the tubular length.

Protective Tray for Cartons, Delmar R. Lanmers, Peoria, Ill. U.S. 2,967,002, Jan. 3. A tray of plastic, such as polyethylene or the like, for retaining a paperboard milk carton or the like, comprising a bottom wall and side walls, the upper marginal edges of said side walls being flared slightly outwardly and provided with a continuous bead thereby forming a channel for receiving condensate from the side walls of a container which may be received in said plastic tray.

Paperboard Carrier, Homer W. Forrer, and Prentice J. Wood (to The Mead Corp., Dayton, a corporation of Ohio). U.S. 2,967,003, Jan. 3. A paperboard carrier for containers, comprising a normally vertical handle panel, a bottom panel having one edge thereof foldably joined to said handle panel adjacent the bottom edge of said handle panel and normally disposed in a substantially horizontal plane.

Container-Cleaning Machine, James P. Whelan (to Pneumatic Scale Corp., Quincy, Mass., a corporation of Massachusetts). U.S. 2,967,321, Jan. 10. Container-cleaning apparatus comprising, in combination, means for resiliently gripping and continuously conveying at a relatively high speed open-mouthed containers in an inverted position and in spaced relation over a straight line portion of an endless path.

Packaged Product and Method of Making the Same, Herbert Rumsey, Jr., (to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut). U.S. 2,967,383, Jan. 10. A method of making a hermatically sealed packaged product substantially impervious to the ambient atmosphere.

Carton Sealing Machine, Bernard C. Barnes, Racine, Wis, U.S. 2,967,387, Jan. 10. In a sealing machine for sealing together a first sheet of material and a second sheet of material folded over one edge of said first sheet; a pair of sealing jaws having opposed face surfaces, means mounting said jaws for relative movement with respect to each other to compress said sheets between said face surfaces.

Filling Machine, Frederick E. Fauth, and Daniel J. Bustraan (to Crown Cork & Seal Co., Philadelphia, a corporation of New York) U.S. 2,967,551, Jan. 10. In a filling machine for filling containers: a stationary frame structure having an upwardly facing annular bearing surface, said surface being provided with at least a pair of concentrically spaced grooves having a lubricating fluid from a source of liquid supplied thereto at a predetermined pressure.

Sheet-Dispensing Package, Robert W. Ebert, Harry J. Sheerin and Philip A. Leekley (to Kimberly-Clark Corp., Neenah, Wis., a corporation of Delaware). U.S. 2,967,610, Jan. 10. A dispensing package comprising a rectangular carton having front and back side walls and having disposed therein in juxtaposition two stacks of folded sheet material with the sheets thereof being in parallel relation with the side walls.

Carton for Merchandising Display Cards, George F. Bolinger (to Sta-Rite Ginnie Lou, Inc., Shelbyville, III., a corporation of Illinois). U.S. 2,967,611, Jan. 10. In combination, a carton comprising spaced parallel vertical front and rear walls and spaced parallel side walls, said front wall having an upwardly opening slot extending downwardly from the upper edge thereof.

Labeling Machine, Herman David Manas and Roy John Manas (to M.R.M. Machinery Co., Brooklyn, a corporation of New York). U.S. 2,967,636, Jan. 10. In a labeling machine for substantially completely adhering a label to a container, including a label magazine, means to urge labels in said magazine toward a delivering end.

Foil Cup and Package and Method of Producing Same, Gerald L. Canfield and Billy J. Schelske (to Ekco-Alcoa Containers Inc., Wheeling, Ill., a corporation of Illinois). U.S. 2,967,652, Jan. 10. A sealable container comprising a cup formed of foil sheet material defining a fluted frustoconical wall structure with a generally upstanding upper flexible marginal lip terminating in a curled bead.

Polygonal Carton, Gaylord E. Seger, Jr. (to Massillon Container Co., Navarre, O., a corporation of Ohio). U.S. 2,967,655, Jan. 10. A carton including eight side panels divided by foldable creases, some of said side panels having ends extending perpendicular to the creases, the other of said side panels each having flaps integral with corresponding panels.

Package, John G. Vergobbi (to Pneumatic Scale Corp., Quincy, Mass., a corporation of Massachusetts). U.S. 2,967,656, Jan. 10. A package comprising a carton having an inner liner bag; said carton having side and end wall panels and top and bottom closures.

Gum-Wrapping Machine, Carl E. Melhorn and Franklin B. Roberts (to Package Machinery Co., East Longmeadow, Mass., a corporation of Massachusetts). U.S. 2,968,139, Jan. 17. A gum-wrapping machine comprising a folding channel having means for folding a wrapper about a stick of gum with one end lying against the bottom face of the gum and the other end trailing therebehind and with the marginal edge portions of the wrapper extending beyond each side of the stick.

Carton, Robert K. Schwebs (to American Box Board Co., Grand Rapids, Mich., a corporation of Michigan). U.S. 2,968,392, Jan. 17. A tray having a bottom and an upstanding peripheral rim, inwardly and downwardly inclined braces anchored to opposite sides of said rim and to said bottom, an upwardly projecting finger on opposite sides of said rim, said upwardly projecting fingers being adapted to be overlapped and secured together.

Container, Claude J. Cantrell, Sr. (to Esso Research & Engineering Co., Elizabeth, N.J., a corporation of Delaware). U.S. 2.968,397, Jan. 17. A selfconsolidating paperboard shipping container comprising a lower rectangular, open-topped box member, a plurality of rectangular open-topped lower tubular bale holders of predetermined volume loosely positioned with said lower paperboard box member.

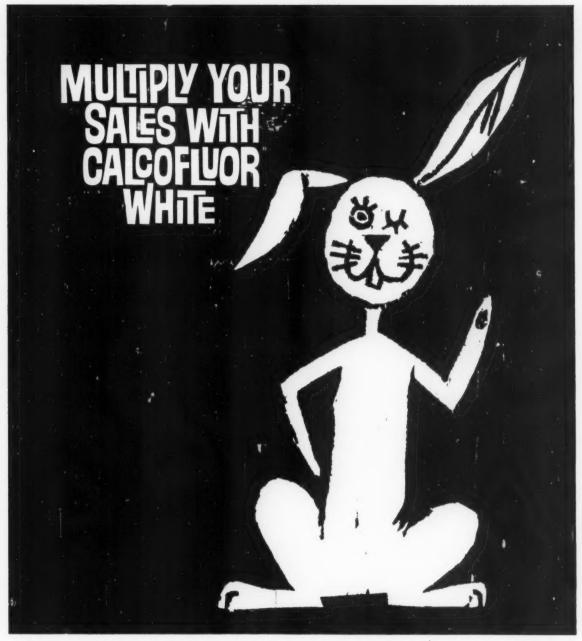
Container Closures and Liners Therefor, Gordon C. Brown (to Minnesota Mining & Mfg. Co., St. Paul, a corporation of Delaware). U.S. 2,968,415, Jan. 17. In a container closure which comprises a cap having a sealing liner therein, the improvement which comprises a liner consisting essentially of a disk of paperboard having a basic weight of from about 60 to about 175 lbs. per 1,000 sq. ft. and a thickness greater than about 0.02 in.

Valve for Aerosol Container, Philip Meshberg, Fairfield, Conn. U.S. 2,968,427, Jan. 17. Valve means for controlling the discharge of a measured amount of fluid under pressure from a container; comprising a tubular valve housing having a transverse apertured wall extending thereacross to form one end of a measuring chamber.

Carton for Dispensing Paper or Like Products, Ernest C. Pallaton (to Fibreboard Paper Products Corp., San Francisco, a corporation of Delaware). U.S. 2,968,431, Jan. 17. A blank to be set up to form a rectangular carton which includes a front panel to bend up from the bottom of the carton and a front panel to bend down from the top of the carton to overlie the bottom front panel of said rectangular carton.

Gusseted Pasted Valve Bags, Prevost Craighead (to Bancroft Bag Factory, Inc., West Monroe, La., a corporation of Louisiana). U.S. 2,968,432, Jan. 17. A valve bag of the character described, formed from a gusseted, multi-ply bag tube having an outer ply and at least one inner ply—said tube, when expanded, being of rectangular cross-sec-

*For more detailed information, copies of patents are available from the U. S. Patent Office, Washington 25, D. C., at 25 cents each, payable in currency, money order or certified check. Postage stamps are not acceptable.



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Patents [Continued]

tion and also being composed of rectangular-shaped side and end panels.

Packaging Method and Apparatus, Robert J. Hickin to Packaging Corp. of America, a corporation of Delaware) 2,968,898, Jan. 24. The method of handling a supply of similar articles for packaging in complements of predetermined multiples, which comprises the steps of feeding a plurality of the artiin an arrangement with their respective ends similarly oriented.

Container-Closing Apparatus, Olav Bjering (to Owens-Illinois Glass Co., Toledo, a corporation of Ohio). U.S. 2,968,900. Jan. 24. In container-closing apparatus, means for carrying upright filled open-top containers and closure caps thereabove along a circular hori-zontal path with the caps and conspaced apart, means for effecting relative vertical movement of the caps and containers to seal the latter.

Cartoner, Bertil Johnson (to Lynch Corp., Anderson, Ind., a corporation of Indiana). U.S. 2,968,901, Jan. 24. In a cartoning machine of the character disclosed, an infeed conveyor, a dead plate onto which said conveyor delivers articles of product to be cartoned, and a collector plate adapted to receive a number of articles from said dead plate.

Reclosable Container, John Henchert (to Continental Can Co., New York, a corporation of New York). U.S. 2,-969,166, Jan. 24. A reclosable container comprising a body having a bottom and a continuous side wall, an upper end portion of said side wall being out-wardly offset to provide said side wall with a continuous internal upwardly facing shoulder and an upper offset side wall portion disposed outwardly of said shoulder.

Perforated Cooking Package, Melvin T. Heller (to Milprint, Inc., Milwaukee, a corporation of Delaware). U.S. 2,-969,292, Jan. 24. A food package adapted to be cooked by submersion in hot cooking liquid, said package comprising a pouch-like food container formed of flexible heat-conductive and high-temperature-resistant metal foil and having front and rear walls provided with liquid entry and drainage openings near the container bottom and also having their top and opposite marginal side edges sealed.

Packing Apparatus, Maurice E. Blais (to St. Regis Paper Co., New York, a corporation of New York). U.S. 2,969, 629, Jan. 31. Apparatus of the class described, including in combination: a substantially vertical ram plate mounted for reciprocable motion with respect to a substantially horizontal table and be-tween a pair of substantially vertical compression plates.

Automatic Container Dispensing, Fill-Automate Container Dispensing, Filling and Capping Machine, Herman Carew and Alfred W. Kinney (to American Can Co., New York, a corporation of New Jersey). In a container dispensing, filling and capping machine, a turntable having circum-ferential recesses to receive and carry containers, dispensing means to deliver containers successively into the recesses of said turntable, filling means to suc-[Continued on page 277]



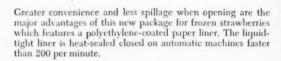
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Patents

[Continued from page 273]

cessively fill containers on said turntable with a commodity, capping means to successively cap the containers.

Means for Forming Paperboard Containers, Michael G. Shenigo (to West Virginia Pulp & Paper Co., New York, a corporation of Delaware). U.S. 2,969,719, Jan. 31. A machine for forming box sections from blanks, each of which comprises four tube panels including first and second endward tube panels and first and second centerward tube panels and also comprises additional panels including a first pair hinged to the first centerward tube panel and having a guiding edge aligned with the central hinge.

Cap or Closure for Containers or Tubes, Nathan B. Lerner (to W. Braun Co., Chicago). U.S. 2,969,896, Jan. 31. A one-piece cap for a container, which container has a threaded neck portion and discharge opening therein, said threaded portion terminating below said discharge opening to provide an unthreaded wall portion.

Flat-Bottom Paper Container, Herbert C. Behrens (to American Can Co., New York, a corporation of New Jersey). U.S. 2,969,901, Jan. 31. A flat-bottom paper cup, comprising a body part formed from a rolled blank having overlapping marginal portions forming a side seam, a skirtless bottom, the lower margin of the body part being folded under and secured.

Unitary Sectionable Container, James Cage (to Reynolds Metals Co., Richmond, Va., a corporation of Delaware). U.S. 2.969.902, Jan. 31. A sectionable container comprising a bottom plate; a bottom wall section including a bottom outer ring extending upwardly from said bottom plate, and a bottom inner ring having the lower portion of its outer surface adhesively secured to the inner surface of said bottom outer ring.

Carton with Integral Pouring Spout and Blank Therefor, Charles E. Cottrill (to Standard Packaging Corp., New York, a corporation of Virginia) U.S. 2,969,904, Jan. 31. A carton made from a blank and comprising three walls defining a corner of the carton, a triangular flap forming part of one wall and defined in part by two angularly disposed score lines.

Reinforced Box and Box Blank and Method and Machine for Making the Same, Chester E. Claff and Carl A. Moeller tto M. B. Claff & Sons, Inc., Randolph, Mass., a corporation of Massachusetts). U.S. 2,969,906, Jan. 31. A box blank comprising a web of paperboard having a longitudinally extending side' wall portion and an integral corner lap at one end of the side wall portion, the web having a marginal edge extending along the side wall.

Reinforced Bag, Warren N. Hebert (to Dixie Wax Paper Co., Dallas). U.S. 2960,907, Jan. 31. A multi-ply bag comprising an outer tubular bag having a straight top edge, a tubular liner, extending within said outer bag and also having a straight top edge forming the mouth of the bag, said outer tubular bag having a band of heat-scalable material on the inner marginal top edge.



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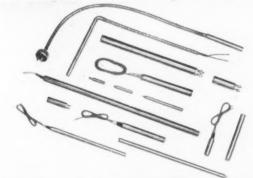
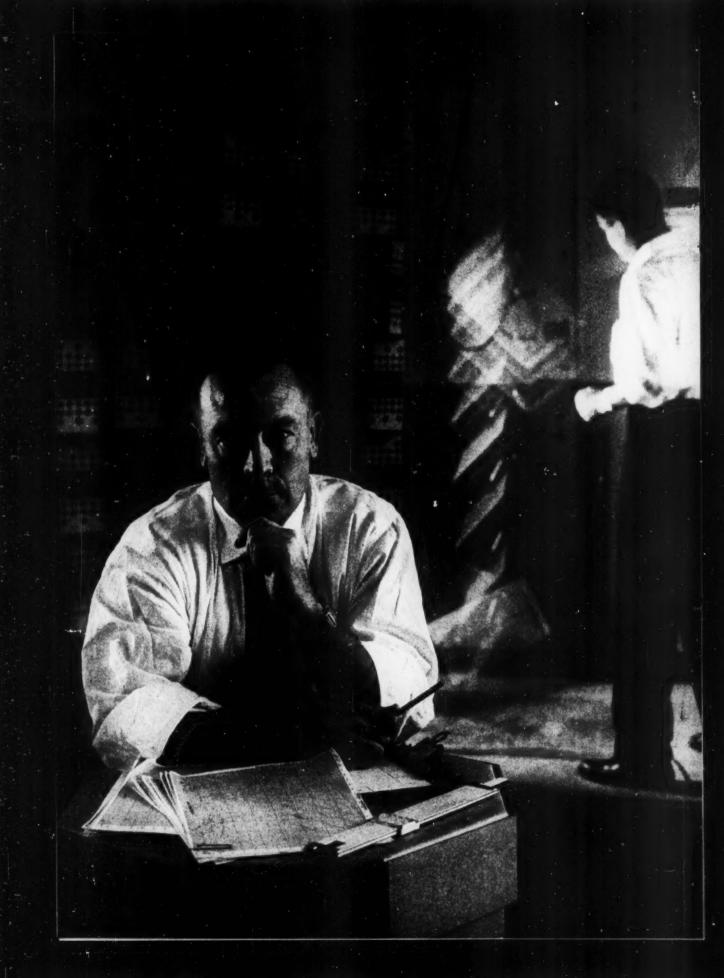


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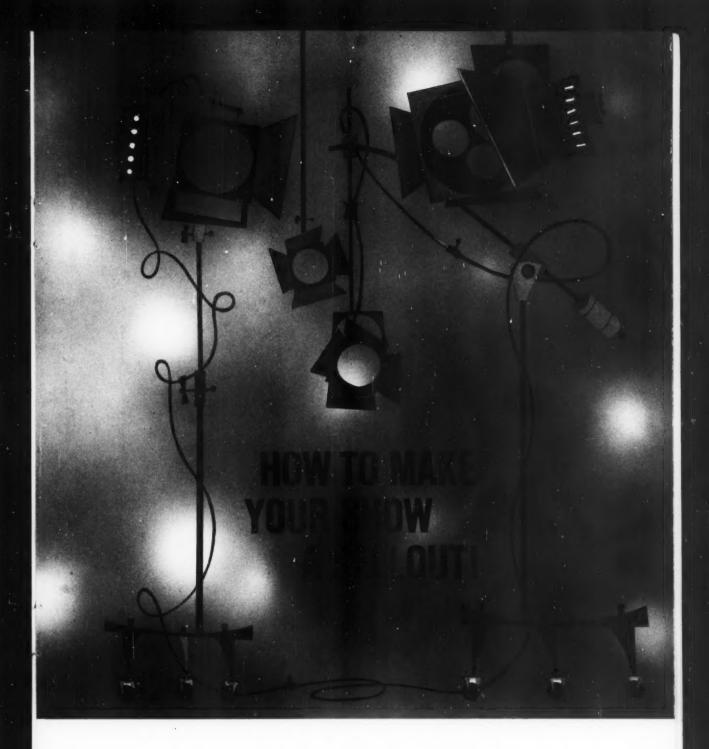
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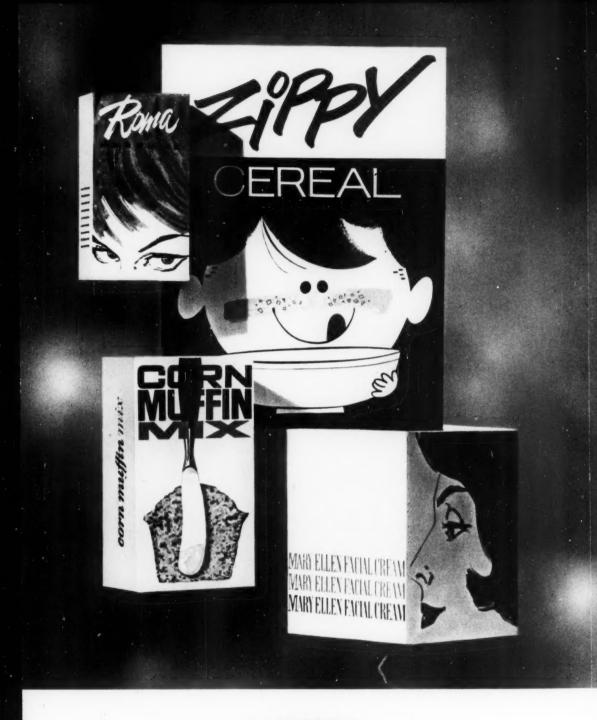


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make for easier folding and high resistance to cracking, important factors in maintaining the quality look of the package in the consumer's home. If your product packaging calls for boxboard, use the boxboard that gives you the most in sales appeal. Ask your boxboard supplier to recommend grades containing Dow Latex in the coatings.





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cloud up or discolor with age. Not to be overlooked is the fine appearance of printed Trycite. When it comes to creating sales-winning packages for small-budget products . . . produce, meat, baked goods, soft goods, novelties, stationery items . . . Trycite for pouches or boxes will make the difference.



Wrap-up for glass

[Continued from page 159]

wall at points between the bottles during the locking operation to achieve an extremely tight wrap. Here, too, the base of each bottle is gripped by die-cut holes in the wrap. A special inserting device adds a die-cut and folded paperboard bottle divider. An interesting point is that all folding and closing mechanisms on this machine are stationary; packaging operations are performed by the movement of the bottles and wrap-around blank.

Burgermeister beer uses a lockingtype carrier that is formed in the opposite way—from the bottom up. It is unique in that bottle dividers are formed from flaps and die-cut tabs in the carton itself. This multipack is handled on a 350-bottle-perminute machine (Andre Paper Box Co.'s "Andre-matic Model G-350") installed at the Burgermeister Brewing Corp. in San Francisco.

The blank is fed under the grouped stubby bottles and folded up over the tops, then secured on one side by two tabs. A fifth panel

is folded between the two rows of three bottles to prevent their touching. Die-cut tabs in the base of the wrap are punched up between each pair of bottles to prevent abrasion at the bases. Partial end flaps, held in place by the bottles, prevent glass contact in shipping cases or trays. The crown caps on the bottles are gripped in die-cut holes, providing a flat top surface that facilitates stacking on shelves or floor.

For the bottle manufacturers, increased use of one-way containers and in-plant multipacks could bring big advantages, as well as two new and different problems.

On the favorable side, economical bulk shipments of glass, strapped on pallets like metal cans, are not only a possibility, but are being tested. Such shipments would enable handling of glass by both manufacturer and packager on compact, high-speed palletizing and de-palletizing equipment, and eliminate the filling and re-filling of basket-type carriers at both the supplier and the bottling plants.

Offsetting these advantages are two problems. The first that must be solved is the elimination of glass breakage by means of careful bulk packaging and the further use of surface coatings to prevent abrasion. These techniques are now being tested on bottles shipped in returnable cartons without dividers. Initial results, according to manufacturers, are encouraging. The second problem is the Interstate Commerce Commission's Rule 41 of the Consolidated Freight Classification, which specifies that glass containers must be separated by 40 points of paperboard. While this regulation concerns only rail shipments of glass by either manufacturers or bottlers, it is an important consideration, particularly to beer bottlers.

New methods of moving both bulk glass and filled containers do not permit any vibration between bottles and are said to be more efficient in reducing breakage than conventional shipping methods. Palletized bulk shipments will be strapped tightly and each layer will be separated with a sheet of heavy paper, while wrap-around multipacks already in use either have die-cut tabs of paper-board that are pushed up between the bottles or grip the bottles so tightly that vibration is said to be



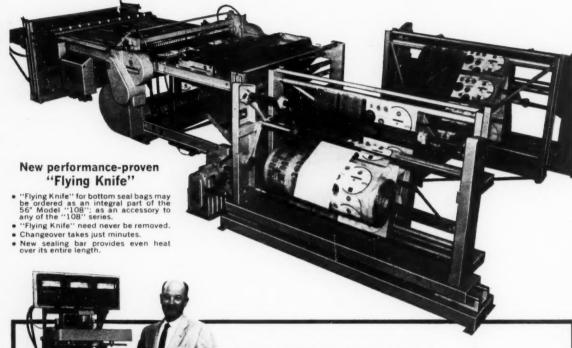
New 56" Schjeldahl "108"... widest, most versatile poly bag machine made!

Produce more bags...larger bags...at lower cost!

Even if you pay a higher price, you can't buy another machine with the capacity, speed and versatility of the new 56" Schjeldahl "108".

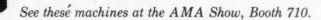
CAPACITY: With single web, makes bags up to 54"; two webs, bags up to 26"; canevenmake 12½" bags, four up. SPEED: Operates at as many as 120 cycles per minute.

VERSATILITY: Side weld or bottom seal; single or multiple webs; exclusive Twin Rack Control lets you take different draws on two webs running simultaneously.



For positive Air-Tight, Liquid-Tight Polystyrene Seals!

Now, your product can be hermetically sealed in an FDA-approved container . . . sealed with the new Schjeldahl Polystyrene machine. Accepts sizes up to 9" x 11" x $3\frac{1}{2}$ " in nearly any shape with interchangeable dies. Dies accept a variety of lids . . . flat, recessed, dome and telescoping. Exclusive 180° fold-over lock plus positive heat sealing makes joint as strong as polystyrene package itself. Withstands temperatures of -40° to $+180^\circ$.





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impossible. Suppliers have provided the ICC with convincing evidence of these facts; they confidently expect a favorable revision of Rule 41 within the next few months.

Bottlers and suppliers hesitate to predict how far the wrap-around carrier will go, since it is naturally hitched to the future of one-way bottles, and opinions conflict concerning their ultimate market.

However, one-way glass is definitely on the rise and, because of their economy, the one-way carriers seem sure to parallel this growth. In 1960 more than 1.9-billion oneway beer bottles were produced, a rise of 33.1% over 1959. Single-trip soft-drink bottles were up 17.7%, to 239,760,000 units. The total of more than 2.1-billion one-trip beverage bottles outstrips preliminary figures of only one month ago. Chief responsibility for this gain is the "Handy" bottle-2 in. shorter and an ounce lighter than its predecessor-which initially costs less than a can and has enabled glass to boost its share of the no-return beer market from 13 to 20%, according to one authority.

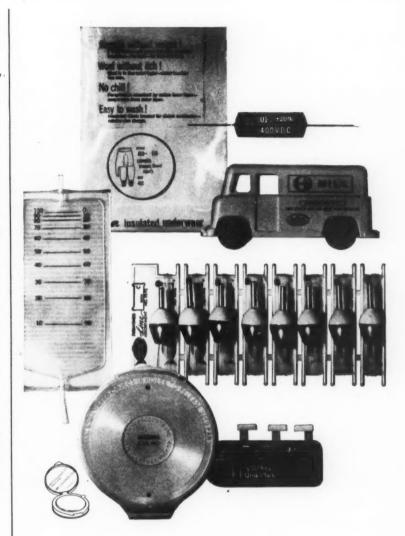
Since production of multiple-trip bottles still adds up to almost 430,000,000 units in beer and more than 1½-billion for soft drinks (which figures could be multiplied by 20 if there were a 100% switch to one-way bottles), there appears to be a gigantic field for growth in non-returnables and in the new wraparound multipacking systems.

GM blister packs

[Continued from page 193]

package both lawn-mower plugs in single blisters and pairs of marine plugs in twin blisters. Both packages use the same tapered blister of 10-mil acetate—3 in. long by 1½ in. wide and ½ in. deep—prefabricated by AC on another machine. The packages also use the same-sized card. On mower-plug packages the single blister is located near the bottom of the 6-by-3¾-in. pyroxylin-coated card; on marine-plug packages one blister is in this same spot, while the second is directly above.

AC's blister-sealing machine can produce up to 90 packages per minute. The machine has six stations, arranged on a circular table which revolves clockwise toward the seal-[Continued on page 292]



No doubt about their identification and decoration

—it stops the eye, tells the story, helps the sale. This is marking everybody can read—made by Markem machines and printing elements. And perhaps most important, the Markem specialty inks used have just the right combination of opacity, color, adhesion and drying speed each type of plastic requires.

This is the "Markem method" that can be working for you—the right machine, type and ink to do your particular marking job quickly, clearly and at low cost, in your own plant. It stays clear and attractive because it stays on your product and can't fall off or easily smudge. Call your Markem representative for complete facts, or write Markem Machine Co., Keene 1, N. H.

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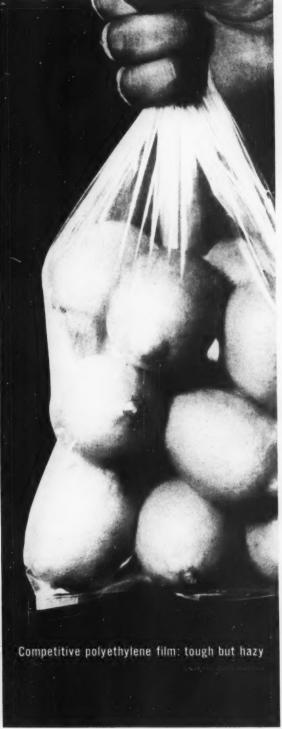
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COMPARE Du Pont's new 2 in 1 polyethylene with the film you are now using

Is yours just as clear? Then test for strength. Or perhaps yours is just as strong. But is it as clear? Sure, you can get poly with just one of the properties . . . but Du Pont's 2 in 1 polyethylene combines both crystal clarity and toughness. Many, many packagers have already compared and switched to Du Pont's 2 in 1 polyethylene. See why. Now. Call your Authorized Converter or Du Pont Representative. Du Pont Company, Film Department, Wilmington 98, Delaware.

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[Continued from page 289]

ing mechanism. Each station has eight pairs of cavities or nests. When single lawn-mower plugs are packaged, only the outer nest in each pair is used.

An operator removes the pre-made blisters from a hopper, inverts them, and inserts a plug and gasket in each. Two other operators place the filled blisters in the nests and also position a card face down over each. The station then moves toward the sealer as loading is repeated for the following station.

On AC's machine, heat is applied through the card from a platen located above. This is in contrast to another common blister-sealing method in which heat is applied from underneath directly to the thermoplastic material. AC's machine demands a higher temperature and a longer sealing cycle than would direct heat, but it has the advantage of being more flexible, AC engineers believe. And exact registration is not so acute.

The platen of the sealer has projecting lip-like sealing dies, each conforming to the contour and location of a blister positioned below. Heating elements located in the platen maintain the lips at a temperature of 450 deg. F. As each

station moves into the scaler, the airpowered platen closes for approximately 4 sec, and bonds the blister to the card. The platen opens, the station revolves out of the scaling area, and completed packages are removed and cartoned as the next station enters the scaler.

As packaging shifts from one type of plug to the other, the sealing platen must be changed over, since the double-blister pack requires 16 sealing lips and the single-blister pack needs only eight. Air pressure also is increased when double blisters are being run. Complete changeover takes about one hour—allowing time for the dies to cool.

Both cards are of 0.025 coated board with kraft back. Graphics are similar, although the cards have different offset color schemes. Both cards have hang-up holes and carry a few lines of promotional copy to boost impulse sales. Both also have printed listings on the back of the card to indicate brands of outboard engines and mowers for which the plugs are suitable. The marine-plug card is perforated between blisters so plugs may be sold singly if desired. However, sale of two plugs is encouraged by copy promising a "waterproofed package" and urging buvers to "always carry a spare." •

Aluminum's 75th anniversary this year

The 75th anniversary of the discovery of the electrolytic process for producing aluminum is being celebrated this year. It was marked recently by The Aluminum Assn. with a symposium at Oberlin College, Oberlin, O., where in 1886 Charles Martin Hall, working in a woodshed adjacent to the campus from which he had been recently graduated, climaxed months of research with successful experiments that produced small, button-sized globules of metal. His process, using pure alumina, cryolite and electrolytic reduction, is virtually unchanged in today's vast operations.

The importance of Hall's discovery gathered momentum as it became evident that a lightweight, functional and attractive metal was needed in transportation, building and packaging. In 1888, Hall, Alfred Hunt and George Clapp founded The Pittsburgh Reduction Co. with \$20,000 capital. The first commercial product of this company, later

named the Aluminum Co. of America, reportedly was aluminum utensils, which resulted in rapid and widespread appreciation of the new metal's qualities and characteristics.

The first aluminum foil was produced in the United States about 1914, competing with tin foil, which had been produced here since 1858. Aluminum foil suitable for packaging came into use about 1924; aluminum cans, only recently.

Today about two million tons of aluminum are produced annually in the U.S. About 5% goes into foil for packaging. Rapidly increasing amounts are being used for cans, aerosol containers, closures and rigid foil pans.

Packaging ranks fifth among users of aluminum. Aluminum production may rise to 10 million pounds by 1975 in the U.S. and packaging consumption may increase to 10% of this total, it is predicted, with aluminum cans rising to billion-unit consumption.

A test of STRENGTH

We have always believed that KARD-O-PAK* having a plastic liner whose seams are not only heat sealed but are also doubly protected by interlocking paper overfolds is the strongest bag made today. However, the only proof is the actual test and here is one we would like you to try. Drop us a note and we will supply the KARD-O-PAKS. Blow one up with air. Hold firmly the top and twist but do not support the bottom. Apply all the twisting pressure possible with your hands. We would enjoy hearing your conclusions.

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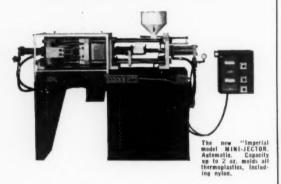
PLASTIC INJECTION MOLDING MACHINE

"Very successful low-cost production of Nalgene test tube closures," reports Nalge Co., Inc., Rochester, N. Y.

"We are using our MINI-JECTOR to make closures for Nalgene test tubes. These are friction-fit closures, made of polypropylene, in a triple cavity mold. Of course other similar items could be tooled. Almost any material can be run in the MINI-JECTOR—conventional polyethylene linear polyethylene, nylon, etc."-Nalge Co., Inc.

So says one satisfied MINI-JECTOR user in the packaging field.

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An unlimited variety of plastic parts can be molded successfully with versatile MINI-JECTOR plastic injection molding machines. Four basic types of MINI-JECTORS are available. Capacities range from sub-miniature to 2 oz. Models start from under \$1,000. to \$6,380.

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Research on design

[Continued from page 162]

graphic design and treatment of the company logotype.

His recommendations were approved, subject to verification by a design research laboratory not connected with the designer. This group conducted widespread consumer testing of various design elements, with special emphasis on product illustration. More than 88% preferred stylized sketches to realistic half-tones of the more intimate items.

The semi-trapezoid construction was also tested thoroughly before, the company adopted it.

A great deal of study was devoted to color. It was considered essential from the first because the products themselves have no color appeal and the line is so large. Color is also a potent psychological tool, so Bauer & Black decided to use it in a way that would appeal to specific buyers.

The line was broken down into four product categories according to use. Laboratory tests weighed the favorable responses in each product category to a series of colors.

In general, the color which produced most favorable responses in each category has been given either to the most popular or to the topquality item in that category, another hoped-for spur to sales of higherquality merchandise. However, no color is confined to just one product. This breaks with previous packaging thinking at Bauer & Black because former packaging used a different color combination for each product. Research showed this was an unnecessary expense. So now each color may be used for as many as six different products. But no color is used more than once on cartons of the same size.

The new packaging is just now reaching national distribution, but excellent response in the first few weeks of exposure has convinced the packager that its move was a good one. The company is solidly sold on the value of scientific package research. Far from inhibiting the creative process, as some detractors argue, Bauer & Black believes the research tends to enhance it. Further as in this instance-affirmative research results can give packagers the courage to be different, a healthy counter-trend to today's worrisome packaging imitation. .







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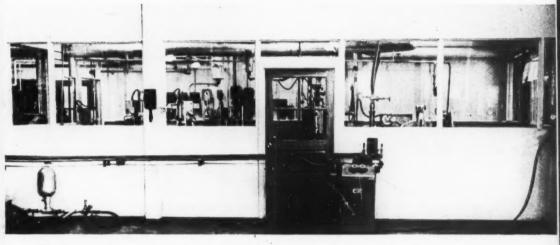
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The SPECIALIST does a better job



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Filling Line in FLUID'S Main Plant

Ships' officers, doctors and members of similar vocations acquire amazing skills because they specialize. This is the case, also, with FLUID CHEMICAL COMPANY, INC. Since 1921 we have specialized in contract packaging.

After the aerosol container was conceived in World War II, our specialization became even more sharply defined. Today we are known principally as liquid and

aerosol filling specialists. Our many contributions to the technology of aerosol filling have kept us in the forefront of this rapidly growing industry.

Among the interesting developments we have helped to pioneer is the use of hydrocarbon propellants. Their use has greatly widened the range of products to which aerosol dispensing is applicable. Our main plant includes an aerosol line housed in an explosion-proof building, designed and constructed especially for butane-propane aerosol filling. Every precaution for safety is taken, and methods are the most efficient known to the industry.

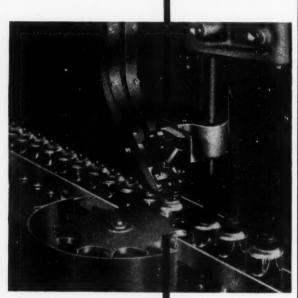
Send for further information regarding FLUID'S facilities for serving you. Write or phone Fluid Chemical Company, Inc., 872 Mt. Prospect Ave., Newark, N. J.—HUmboldt 4-1000.

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UP TO 300 METAL OR PLASTIC OVERCAPS A MINUTE!

Now you can have bigger profits through faster production on your capping lines. Consolidated's H-O-F Capper with new sorter chute and chute escapement produces up to 300 metal or plastic closures a minute for extra profits and increased efficiency!

Secret of this increased speed is Consolidated's exclusive escapement mechanism that automatically holds back overcaps until container is in position . . . then rolls each closure on carefully and precisely. Free of jam-up or missed container.

The H-O-F Capper is easily adaptable for every type of fitment specially designed for the Food, Cosmetic and Drug industries. Quick, easy changeover from one size container to another.

Find out how the H-O-F Capper can speed your capping lines and protect profits in drug, cosmetic and aerosol fields. Write Sales Manager:

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A Subsidiary of International Paper Company

Effective package copy

[Continued from page 151]

elaborated by copy that stresses the properties of Cyanamid products. Remember, the manual directives conclude, every inch of the package surface should be put to work (1) to create an impression of impeccable quality, (2) to inform and (3) to sell

The preparation of copy for cosmetics and toiletries packages is usually a simpler problem, because directions are somewhat shorter. It doesn't take many words to tell how to apply a facial cream or a face powder. Yet even here the changes necessitated by different shades of face powder, lipsticks and eye shadow are continual. Aziza, a division of Prince Matchabelli, estimates that something like 75 different package inserts are required for its eve cosmetics. And they are changed constantly to keep them up to date and to offer better color suggestions.

The cosmetic field offers a wideopen opportunity to put more sell on the package surface. A costume complexion-shade selector-a chart layout to match compressed-powder shades with costume colors and skin tones-apparently has been so successful on the back of Pond's cartons for Angel Face Fashion Cases and stretchable-film card-and-blister packs for Angel Face "Date" Case that Pond's may soon put it or Angel Touch Liquid and Angel Touch Face Powder packages.

It would seem that the value of well-planned descriptive copy on a package should be obvious to every packager. Yet it is amazing how many packages can still be found lacking in this respect, or with the information so poorly arranged that you can't find it.

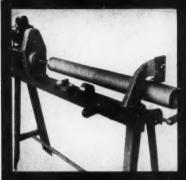
There are glass cutters on the market without one word of instruction about how to use them.

There are food products with so many recipes you can't find basicpreparation data.

There are hundreds of items notably toys and furniture-that must be assembled by the consumer. with package instructions that not even an engineer can interpret.

It is often said that consumers don't read directions. The fact is that they often can't find them or. having found them, can't understand them. There is no excuse for any

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HANDIEST PORTABLE CORE CUTTER

Accommodates 1 I.D.s on most standard models — larger models take cores up to 80 with I.D.s up to 8 — adjustable stops. Furnished with legs or bench mounted. No lubrication required. PRICED FROM \$425.00



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LOWEST COST 2-DRUM WINDER

SR-60 offers score or shear type cutters pneumatically controlled rider roll—constant tension through powered feed rolls. Web sizes to 72 — parent rolls to 40 — plus many optional features. Designed for simple operation. PRICED FROM \$10,900,00

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Fairfield Plastics offers you sixty high styled variations from which to select your plastic Dusting Powder Package.



AEROSOL COVER CAPS

Exclusive, patented positive lock (locks inside valve cup) cover caps for all fabricated 202 cans. Ribbed or smooth.

Top design or identification if desired.

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packager not presenting product information on the package in complete and readable form. It is the very last chance he has to communicate with consumers in their own homes and to teach them how to use a product so successfully that they will come back for more. .

Stripping can coatings

[Continued from page 211]

too long a time was required, or the tinplate was affected. However, the trials did indicate that a hot, anilineammonium hydroxide mixture would make an effective coating remover. Experiments showed that 1 part of aniline to 10 parts by volume of 12% ammonium hydroxide was a satisfactory coating remover. Coated specimens were immersed in this mixture at near-hoiling temperature under a fume hood. Coatings rapidly floated free or could be flushed off with running water. Tinplate was not affected.

Acknowledgments

Grateful appreciation is expressed to Mr. William J. Pleticka of this laboratory for determining the amount of tin dissolved during the stripping action in removing organic coatings from cans. Thanks are expressed to the research departments of the American Can and the Continental Can companies for their constructive suggestions and the comprehensive variety of samples of coated panels which they furnished for investigation.

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A Bunn Tying Machine cuts time and costs wherever there's a volume bundling job to be done; in offices, factories, publication firms, lettershops, warehouses, supermarkets, bakeries, laundries, retail stores.

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Automatically

The flexibility of the Derby Dispens-A-Ply Product Labeler is demonstrated by many diverse field installations. A cosmetic manufacturer identifies the color shade of lipsticks on the containers with pressure-sensitive labels . . . a meat packer labels products of many shapes and sizes with a single installation . . . a candy manufacturer labels film wrappings for boxed confectionery . . . distributors price-label nationally-known products . . . and there are many other examples of sale-price labeling, premium deal labeling and special offers requiring spot labeling . . . all applied with the versatile Derby Dispens-A-Ply.

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Studies by camera

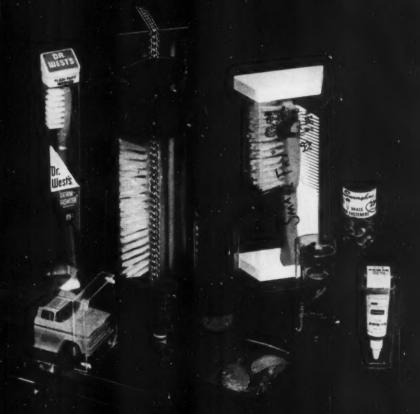
[Continued from page 208]

movement. To give the vials time to fall over the trailing edge, the quadrant was adjusted to give as long a sweep as possible, bearing in mind that the speed of the quadrant at impact with the vial increased also with depth of swing; this would accentuate faulty presentation. It also became obvious that the length and position of the top guide (as shown in Figure 2) were most critical. The vial had to be trapped by this guide and forced along by the advancing quadrant if the vial was to be presented square to the label-bearing drum, A longer guide would insure that vials ejected upwards from the top of the quadrant did not cause jamming, but that they were forced back into their correct path.

The result was raised output and reduced stoppages. Not only were the immediate difficulties solved—the work provided the information needed to modify the machines.

Finally, we may say that these films are still doing active service; they are used as a means of instruction for fitters new to these labeling machines, who in this way are given an insight into the operation of the mechanism and the effects of adjustments which they could obtain in no other way.

Devil



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A new setting for the Packaging Show

[Continued from page 190]

AMACO, INC. Booth 107. Exhibit of Newman automatic labeling machine, Type 2B; Type 3C Newman semi-automatic labeling machine; Newman fully automatic vial and ampoule printing unit, Type 1F; Arbis/5FO automatic vial and ampoule silk-screen printing and firing unit; Hoefliger & Karg fully automatic leaflet-folding machine, Type FA-3. Personnel: R. J. Newman, B. Newman.

AMERICAN CAN CO., American-Wheaton Glass Corp. Div. Booths 360, 363. Display of clear and amber bottles for producers of food, beverage and household products. Personnel: R. A. Ostram. Hotel: Blackstone.

AMERICAN CAN CO., Bradley-Sun Div. Booths 360, 363. Introduction of new type of seamless pressure can made of aluminum, using piston principle to separate product from gas propellant for viscous products, including foods; regular extruded aluminum aerosol, also seamless; plastic and metal squeeze tubes. Personnel: R. H. McCarthy, Jr. Hotel: Blackstone.

AMERICAN CAN CO., Canco Div. Booths 360, 363. Large assortment of metal and composite containers including new lightweight aluminum and steel cans, and other containers featuring full-color lithography. Personnel: A. Black, F. A. Smith, C. S. Stephens, S. J. Guidice, R. Hollister. Hotel: Blackstone.

AMERICAN CAN CO., Dixie Cup Dix. Booths 360, 363. Exhibit of assortment of metal, plastic and paper cups and lids: versatility of cup package for food and non-food items stressed; coffee served in new polyethylene-lined hot-drink cup. Personnel: C. Moore, S. Sawyer, J. R. Bennett, G. E. Beatty. Hotel: Blackstone.

AMERICAN CAN CO., Marathon Div. Booths 360, 363. Wide assortment of cartons for food products, as well asother packaging materials; new Marabond heat-sealing label that adheres to wrapping materials of all kinds, including waxed surfaces. Personnel: K. G. Houts, R. Clark, J. Davis, P. R. Rundquist, P. Anthony, R. Farrell, H. Hoyland, F. Broeren. Hotel: Blackstone.

AMERICAN CAN CO., Milk Container Div. Booths 360, 363. Exhibit of new 2-qt. container, polyethylene-laminated inside and out. Personnel: D. Poinier. Hotel: Blackstone.

AMERICAN PARTITION CO. Booth 131. Solid fibre partitions for inner packing of glass-packed foods and heverages on display. Personnel: H. L. Davis, E. C. Schaefer, D. E. Heckert, R. Ternes, L. Meyer, J. Ficke, Hotel: Avenue Motel.

AMERICAN VISCOSE CORP., Film

Div. & Industrial Packaging Dept. Booth 837. Display of sample packages to dramatize cellophane's versatility in product protection, package structure and design; tough Avisco T films and RS polymer-coated films; nitrocellulose bands, meat casings and cord strapping. Personnel: R. E. Reynolds, G. W. Kindt, P. E. Lawrence, B. F. Millican, M. G. O'Connor, C. R. Shaffer, V. N. Winkler, W. B. Zemann, J. G. Mohlman, J. D. Conti, J. A. Houle. Hotel: Conrad Hilton.

AMSCO PACKAGING MACHINERY, INC. Booth 826. Exhibit of new Amscomatic 75, including conveyor plus sealing unit for heat sealing polyethylene and other film packages at 900 lineal inches per minute; Amso PJL power jaw labeler which automatically attaches header label and seals polyethylene packages; also Frazier & Son materials-handling conveyor system and floor model volumetric filler. Personnel: E. E. Messmer, J. D. Sylvester, E. P. Primosch, F. P. Czifra, J. M. Kelly, E. H. Watson, S. R. Watson, H. K. Weber, G. Wiedersheim, R. Frazier. Hotel: LaSalle.

ANACONDA ALUMINI M CO. Booths 1213, 1214. Introduction of spiral-wound foil can, using laminated aluminum foil in place of conventional tinplate steel or steel aluminum which makes less-expensive and lighter-weight cans; rigid foil containers for new packaging applications. Personnel: C. H. Huflage, J. E. Bouhl, W. R. Cory, A. W. Mengel, O. K. Schmied, J. N. Krause, J. T. Trousdale, G. L. Bitting, H. J. Virnig, S. A. Robinson, K. W. Foster. Hotel: Pick-Congress.

ANDERSON BROS. MFG. CO. Booth 148. Exhibit of Model 340 universal filler and capper; Model 382 frozenfood filler; also Model 520 sanitary dumo. Personnel: R. F. Anderson, W. E. Gunnerson, H. Cop, R. LaForge. Hotel: Eastgate.

ANDREWS, MARK, CO., INC. Booth 1042. Display of new Model #612N4 in-line flexographic printing press which will accommodate up to eight printing stations and includes die cutting of pressure-sensitive label stock, waste stripping, sheeting or rewinding with printing and accessory stations as individual units mounted in line and joined together with common drive shaft, making it possible to place the various units in any sequence desired: also new high-speed tabulating card press which will print up to two colors on each side of the material, delivering dry finished cards for packaging at rate of 35,000 cards per hour. Personnel: D. S. Lehmann, R. Kuntz. Hotel: Shore Drive Motel.

APEX MACHINE CO. Booth 135. Exhibit of marking machines; new airoperated hot stamper; new two-color



The hot ideas in packaging have a habit of popping up at Milprint! One reason is that no other source works with such a wide variety of packaging materials . . . or has such vast experience in combining them for "custom built" laminations or extrusions. The result is sparkling, image-of-quality, protective packaging — like that produced by Milprint for Downyflake toaster-ready frozen waffles, pancakes and french toast. Put Milprint research and development to work on your packaging! Nationwide facilities assure fast, economical delivery of any quantity. Review your packaging regularly with Milprint experts! Start now.

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high-speed cylindrical press; standard automatic, semi-automatic and handoperated machines, conveyor markers, web printers, etc. *Personnel:* O. W. Bodor, A. R. Coningsby, *Hotel:* 50thon-the-Lake Motel.

ARABOL MFG, CO. Booths 529, 530, Display of specification adhesives for minimum cost and maximum efficiency. Personnel: W. A. Weaver, H. E. Weingartner, E. E. Diedrichs, A. J. Leary, W. S. Knobloch, F. H. McCourt, W. S. Beaver, F. Belletire, Hotel: Morrison,

ATLAS VAC MACHINE CORP, Beoth 305. Display of R-12 portable sampler thermoforming machine; a new machine similar to Pressure Former with pre-heater specially designed for forming containers; forms and trins at 10 to 12 cycles per minute and handles acetates, butyrates, etc., as well asoriented polystyrene materials, Personnel: D. R. Zelnick, F. V. Colberg, R. Cole, Hotel: Hilton.

AUTOMATION ENGINEERING LAB ORATORY, INC. Booth 1222. Presentation and description of automation consulting and development services; exhibit of "Step-by-Step Automation." a method of creating automated production equipment for plants at minimum risk and with complete financial control; accomplishments in the automation of packaging. Personnel: R. S. White, C. T. Raymond.

AUTO-VAC CO. Booths 615, 625. Exhibit of continuous blister packs; blow-molding samples, bottles, toys, etc. Personnel: I. G. Freeman, W. Blamey, G. Tanner, E. Segen, W. Shilling, R. Rennie, D. Bensey, Hotel: Congress.

AVERY LABEL CO. Booths 227, 228. Demonstration of latest pressure-sensitive labeling materials, processes, techniques and equipment. Personnel: R. Pearson, M. A. Contreras, R. McFarland, J. Watts, Hotel: Avenue Motel.

BAGCRAFT CORP. OF AMERICA. Booth 1231. Exhibit of heavy kraft bags for the can industry; heavy-duty packaging for parts, components and hardware items; special bags and pouches for chemicals, powders, soaps, detergents and abrasives; pouch packaging in high-barrier film of great strength; flexible packaging and packaging for trozen-food industry.

BARNES DRILL CO. Booths 1224. Exhibit of new Barnespak high speed screw feeder for packaging metal or wood fasteners from three to 2,000 per package, at speeds of up to 60 cartons per minute. Personnel: K. Casson, C. Harker, Roger Marriott, Robert Marriott. Hotel: Coxrad Hifton.

BARTELT ENGINEERING CO., INC. Booth 436. Exhibit and demonstration of latest automatic equipment for flexible pouch packaging. Personnel: H. L. Bartelt, W. T. Boston, R. D. Lamb, J. L. Tobin, E. R. Peterson, F. H.

Baker, C. S. Worthington, Hotel: Palmer House,

BEMIS BRO, BAG CO, Booth 242. Exhibit of latest in line of paper, multiwall, textile, plastic, waterproof, specialty covers and bags; Morgan Adhesives' self-adhesive papers, label stock and machine for dispensing pressure-sensitive materials; Air-Formed Products' blow-molded plastics, new and creative bottles, containers and shapes; new Ultra-Pak machine; deminstration of thermoplastic tape-top bag-closing machine to apply tape closure on sewn open-mouth multiwall shipping sacks; molded-pulp shapes and most recent applications for cushioned protective packaging from Tekmold Products: Liqua-tainers, new concept for packaging fluids.

BINER ELLISON MFG. CO. Booth 1020. Display of Labelmatic autematic spot-labeling machine; Feedomatic air cleaner, simultaneous single-filing and air cleaning of bottles; Filabelmatic, simultaneous filling and labeling; Volumatic pressure filler for viscous and semi-viscous products. Personnel: T. E. Ellison, S. F. Ellison, Hotel; Bismatck,

BIVANS CORP. Booth 515. Exhibit of Vertuck 120 carton set-up and closing machine which operates at speeds of 120 per minute: Tuck-O-Mat with coder-printer running in conjunction with New Jersey Machine Corp. labeler, to label flat-folded cartons with thermoplastic labels just prior to forming and closing by the Tuck-O-Mat. Personnel: E. L. Bivans, R. Bivans, Hotel: Palmer House.

BON-R-REPRODUCTIONS, INC. Booth 187. Instant packaging featured with visualization of a new package-handled speedily and economically through silk-screen reproduction, enabling companies to preview an exact replica of a new package prior to production printing, to provide a method to test for color appeal and design impact. Personnel: J. Spielman. Hotel: Morrison.

BOSTITCH, INC. Booth 633. Exhibit of new wide-crown top and bottom stapler, entirely air operated; demonstration of assembling of colorful and convenient carry cases to show rapid and secure box-bottoming equipment; "Parade of Packaging" illustrating how stapling and stitching can assemble or close corrugated containers and bags. Personnel: J. M. Nestor, J. M. Wilson, M. C. Schuler, G. G. Slade, S. L. Smith, L. K. Grimes, W. E. Hofer, J. K. Quinn, Jr. Hotel: Palmer House.

BRAUN, W., CO. Booths 332, 333, 334. Verious phases in the development of a package design to be featured; design staff on hand to discuss problems. Hotel: Sheraton-Blackstone.

BROCKWAY GLASS CO., INC., Booth 716, Joint exhibit with subsidiaries Celluplastics, Inc., and Demuth Glass

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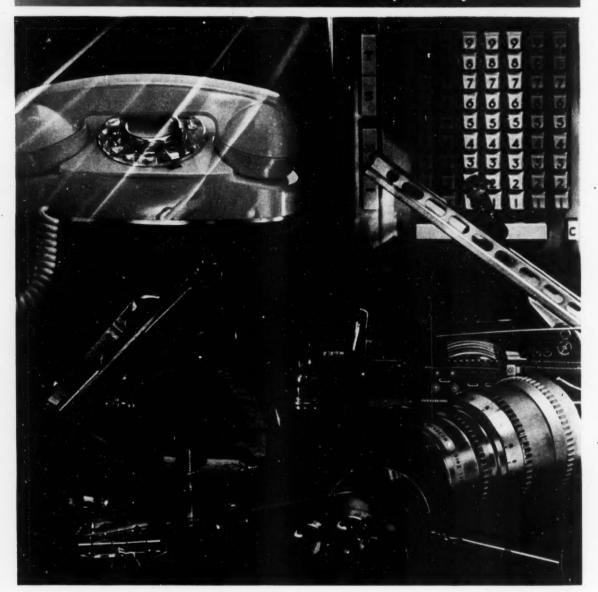
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Works to include wide mouth, narrow neck, flint and amber glass containers; glass tubing and vials; also blown plastic containers. *Personnel:* M. E. Hartless, D. A. Youngdahl, R. W. Mattern, W. J. Souders, W. S. Borland. *Hotel:* LaSalle.

BROWN-BRIDGE MILLS, INC. Booths 1005, 1006. Display of heat-seal papers; Pancake all-weather gummed papers; Flat-as-a-Pancake gummed label papers; Striptac pressure-sensitive-label papers; Red Streak gummed tapes. Personnel: II. E. Murgatroyd, E. C. Corey, T. Gridley, F. Holt, T. S. Rowlett, R. E. Gallan, J. P. Wilt. Hotel: Avenue Motel.

BUNN, B. H., CO. Booth 1044. Exhibit of regular line plus a new table model tying machine. Personnel: R. B. Bunn, R. J. Darby, O. W. Spencer, D. Gregory, B. Bolz, R. Williams.

BURT, F. N., CO., INC. Booth 1038. Display of modern, up-to-date creative packages: many types of finishes now used for both protection and a creative approach. Personnel: O. W. Honsberger, R. J. Lowe, A. W. Buchanan, L. House. Hotel: Drake.

BURTON, JOHN, MACHINE CORP. Booth 181. Exhibit of automatic Stri-Stamp machine for high-speed application of pre-coated thermoplastic heat-seal. Federal liquor tax stamps; automatic Cellubander machine for application of cellulose band seals; "Bi-Planar" stainless-steel conveyor chain to convey packages and bottles through corners without transfer. Personnel; H. B. Rice, J. E. Struer. Hotel: East Gate.

CAMPCO DIV., Chicago Molded Products Corp. Booth 205. Display of thermoplastic sheet and film; also products manufactured from Camco sheet and film. Personnel: J. J. Bachner, E. F. Bachner, Jr., J. L. Bachner, S. Whisler, S. Cizmar, J. Grundy.

CARBERT MFG. CO., Div. Pneumatic Scale Corp., Ltd. Booths 354, 355. Exhibit of newly developed automatic bagloading unit operating in conjunction with Model 1010 bag sealer packaging bakery products in polyethylene bags. Personnel: R. W. Saumsiegle, R. L. Hewson, R. Wing, N. S. Ross, R. W. Coughlin, A. T. Buskens, R. H. Eiff, W. E. Coughlin, R. L. Murphy, E. J. Smith. Hotel: Sheraton-Blackstone.

CELANESE PLASTICS CO. Booth 627. Packaging service center featured with qualified staff and consultants to cover all aspects of packaging from design, through selection of materials and components, to assembling and filling; examples of plastic packaging, including wraps, many types of formed and other containers, as well as bottles. Hotel: Palmer House.

CEL-FIBE DIV., Personal Products Corp. Booths 118, 119. Display of new C-D bonded wadding made by a pat-1 Continued on page 3121



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* Responsive to the tremendous consumer acceptance of pouring spouts



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The outstanding strength properties and low specific gravity of films made with Pro-fax permit substantial cost savings through greater coverage by weight. They can be handled on conventional packaging equipment designed for polyethylene. In many instances cellophane equipment will process these films equally well.

Pro-fax films provide a superior, low-cost container barrier, FDA-approved for food use. Ask a Hercules packaging specialist for help in adapting Pro-fax films to your requirements. Call or write:

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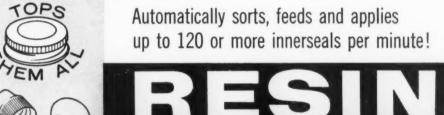
production of cardboard partitions.

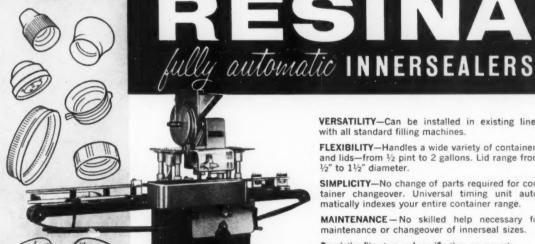
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[Continued from page 309]

ented process for multi-layer bonding, having good resiliency and good recovery from repeated impacts; new testing methods and equipment to confirm special properties of company's cellulose wadding and bring about new uses and additional new product forms; display of wide range of the company's line in a variety of forms, sizes and thicknesses, with many special properties. Personnel: R. D. Glidden, M. A. Checchio, C. E. Sanquist, F. J. Coury, R. D. McMullin, B. L. Levine, J. R. Odell, K. C. Kerrihard, Hotel: Executive House.

CELLUPLASTICS, INC. Booth 716. Joint exhibit with Brockway Glass Co., Inc., and Demuth Glass Works, Inc., covering Clearsite plastic packaging, molded vials, flexible vials and extrusions, cosmetic jars, sleeves, scabbards, boxes and oil-dispensing tubes. Personnel: J. D. Procter, R. Kennedy, G. Johnson, J. McKenna. Hotel: La-Salle.

CHAFFEE, RALPH, & CO. Booth 1121. Exhibit of Rotor-Scalers, heat-scaling machines with automatic infeed, coder dater and hole-punching device; 16 mm. colored movie; heat-scal label applicator which automatically places the label header on filled plastic bags, then conveys bag and label through heat-scaling machine on a production-line basis. Personnel: R. W. Chaffee, W. W. Hints, C. C. Reynolds. Hotel: Conrad Hilton.

CHASE BAG CO. Bouth 412. Poly-Ply multiwall bags that are fully flexible and effective moisture barriers; heavy-duty polyethylene bags with new commercially workable valve closure; flexible packages for industry. Personnel: J. W. Means, E. K. Ludington, Jr., E. S. Elgin, B. J. Chase, Hotel: Congress.

CHERRIN BAG-PAC CO. Booth 285. Exhibit of a new and modern packaging machine in lower cost brackets. Personnel: M. Johnson, P. Cherrin. Hoiel: Conrad Hilton.

CHICAGO PRINTED STRING CO. Booth 1103. Exhibit of Rip-Open tape, a tear tape for corrugated cartons, folding boxes and kraft wraps. Personnel: F. A. Tyler, C. E. Hughson, Jr., A. Fiedler.

CLARK, J. L., MFG. CO. Booths 1128, 1129. New developments in combination metal-and-plastic containers featured; Tectone lithographed finishes; drawn aluminum cans; spring-grip aerosol overcaps; general-line lithographed metal containers, Personnel: F. D. White, J. G. Martin, W. H. Jeffreys, A. E. Bennett, E. K. Porter, D. H. Vaughn, J. H. Barnard, R. W. Malmgren, J. E. Newkirk, J. B. Sheridan, W. O. Nelson, V. L. Faith. Hotel: Drake.

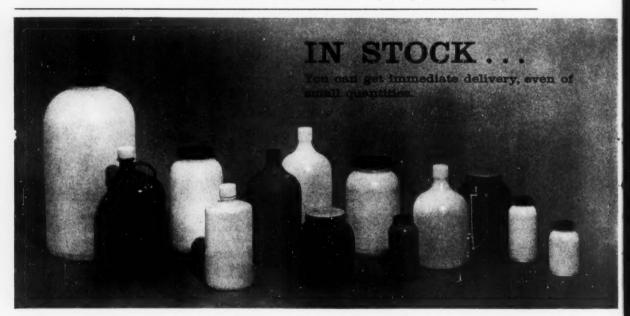
CLARK-AIKEN CO. Booths 616, 617. Display of 46-in. GSR cutter and layboy with Stanford constant-tension unwind stand, shuttle piler, two lift tables, air table, stub shaft and electronic counter. Personnel: J. C. Hart, J. J. Waddock, E. A. Lowry, W. M. Davis, D. R. Sullivan, F. A. Grosso, J. Marby, K. S. Ducayet, HI, G. W. Keates. Hotel: Pick-Congress.

CLIMAX PRODUCTS DIV., Lodge & Shipley Co. Booth 1200. Exhibit of automatic container uncasing machine; uncasing accumulating table; four flap case opener; single filer. Personnel: R, G. Hilgeman, P. A. Anderson, E. F. Rowekamp, P. F. Connelly, E. J. Humphrey. Hotel: Shore Drive Motel.

COLLAPSIBLE TUBE MFRS, COUN-CH. Booths 29, 130, 131. Exhibit featuring mustard in collapsible metal tubes, with samples to be distributed. Personnel: R. D. Eckhouse, Hotel: Ambassador,

COMET INDUSTRIES, INC. Booths 1007, 1008. Conventional Meteor Drape type vacuum-forming machine with new automatic feed attachment: pneumatic trimming press which may also be used for heat sealing; also Quick-Pak featuring complete automation in skin packaging. Personnel: J. E. Kostur, Sr., R. E. Kostur, J. E. Kostur, Jr., H. Kostur, B. Swen, D. Rainville, V. Heisel.

CONSOLIDATED ALUMINUM CORP. Booth 220. Aluminum foil and company's special manufacturing processes



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featured. Personnel: W. D. Miller, T. W. Allison, J. F. Price, W. F. Kaufman, W. H. Franke, D. Beauchamp, I. K. Satterberg, P. Redding, J. Hobbs, F. Jones, Hotel: LaSalle.

CONTAINER CORP. OF AMERICA. Booth 736, Company products and customer services featured. Personnel: I. F. Carty, W. E. Mastbaum, F. D. Empkie, M. C. Lewis, D. S. Lencioni, G. W. Bettke, J. S. Brynestad, D. O. Davidson, J. J. Kelliher, L. F. Lindsay, M. G. Moore, W. J. Poole, C. W. Fisher, E. J. Griffin, A. Kner, L. Ruhmann, W. F. Schafer, G. A. Sill, C. R. Hvitfeldt, P. S. Kosanovich, R. E. Eckerstrom, J. D'Esposito, G. R. Grant, R. L. Porter, L. W. Snyder, J. F. Stiefvater, D. C. Anderson, M. J. Boyd, J. W. Bunch, R. F. Chapman, A. A. Duetsch, R. H. Gordon-Ross, R. R. Jacobs, V. E. Johnson, R. H. MacMillan, J. B: Quaid, C. R. Rothe, D. W. Ruff, R. S. Frunk, M. J. McAulliffe, H. F. Drnec, K. D. Myers. Hotel: Blackstone.

COTTRELL CO., Sub of Harris-Intertype Corp. (See Harris-Seybold Co., Div. of Harris-Intertype Corp.)

COUNT-O-MATIC, INC., Div. U. S. Engineering Co. Booths 150, 151. Demonstration of several new models of Hoppermatic with new, improved features; first demonstration of Elevator Hopper with 14-in-wide conveyor which enables machine to handle much larger items and larger variety of sizes

and shapes than possible with 8-in, conveyor. *Personnel:* B. R. Garrett, G. Sherman, K. J. Kortvelesey.

CRANDALL, INC. Booth 288. Joint exhibit with Fulton Machine Co., Inc., demonstrating new automatic carton-forming machine developed by Crandall, Inc., and manufactured by Fulton Machine Co., Inc., to form and glue double end-wall, double side-wall carton, suitable for packaging wide range of quality products; various cartons will be produced on machine, including pharmaceutical mailers, shoe cartons, hat boxes, stationery items, hardware and other items. Personnel: E. C. Clement, T. D. Lonergan, P. E. Samson, W. Fyfe. Hotel: Sherman.

CREATIVE PACKAGING, INC. Booths 932, 933. See Diamond Plastics Industries, Inc.

CROWN CORK & SEAL CO. Booth 432. Magician on hand to entertain visitors; panel with floating aerosol containers and lug caps; seven sizes of seamless and fabricated aerosol containers; display panel showing increase in market for certain products in pressurized containers; animated display demonstrating the flexibility that live rubber can give for packers using glass containers. Hotel: Palmer House.

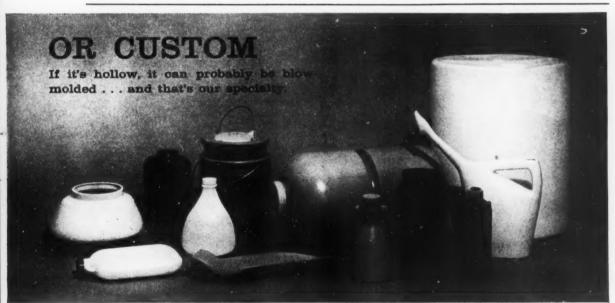
CROWN ZELLERBACH CORP. Booths 517, 518, 519, 520. Gaylord Container Div. Representative selection of corrugated shipping-container designs on display illustrating packaging developments for many segments of industry.

Multiwall Sales Div. Display of two new multiwall bag packers; examples of multiwall packaging showing effect of research in design and packaging to meet specific problems.

Western-Waxide Div. Wide ranges of packaging materials designed for bakery, frozen-food, dairy, meat and dehydrated industries; new Hayssen J-2 packaging machine in operation using specialized pouch stock.

Personnel: A. L. Fox, J. C. Tobin, M. M. Jamieson, P. E. Claus, W. H. Jennings, H. W. Booth, J. M. Arndt, Jr., R. S. Baum, E. E. Pechon, W. J. McDonald, R. H. Stuckert, R. H. Buhrmaster, T. P. Torre, R. L. Matheny, W. E. Baughman, R. Gill, F. Bostock, J. Wilhelm, C. N. Haggerty, Jr., F. R. Campbell, T. B. Sturges, E. J. Taylor, M. Lewis, R. Nordstrom, R. L. Appling, O. Johnson, C. Olstad, D. Stahle, N. Johnson, R. F. Dunbrook, W. E. Townsend, G. Carey, J. McNamara. Hotel: Conrad Hilton.

DAHER CO., INC. Booth 147. Exhibit of decorated and embossed metal containers ranging from four to 12 colors; also 8-in. plates, 10-in. tole trays and unusual shapes and designs of other trays for gift packaging of fruit cakes, cookies, confectionery, tea, nuts, hand-kerchiefs, golf balls, lingeric, writing paper, etc. Personnel: B. Greenstein, C. Molk, D. Vorhees, L. Greenstein,



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And Immediately Available!

STIXIE'S PRESSURE SENSITIVE KROMEKOTE" AND LITHO SHEETS AND ROLLS!

These high quality printing papers in 26½" and 53" widths may be ordered with either STIXIE'S permanent (tamperproof) or removable BP FORMULA 3 adhesive. STIXIE will slit his rolls or sheet them to your specifications at a slight additional charge.

CUSTOMER-TESTED BP FORMULA 3 ADHESIVES ARE RECOGNIZED AS THE FINEST IN THE INDUSTRY.

STIXIE'S mass production of stock-size Kromekote and litho sheets and rolls means big savings to you. Write now for your free sample swatch booklet, price list and questionnaire. If you

sample swatch booklet, price list and questionnaire. If you have a special problem, fill out the questionnaire, return it to us, and let STIXIE'S quality control lab find the solution for you.



CCATED PRODUCTS, INC.

275 LINCOLN BOULEVARD • MIDDLESEX, NEW JERSEY • ELLIOT 6-3700
140 WEST 31ST STREET • NEW YORK 1, N. Y. • OXFORD 5-0417 • WORTH 2-0895
(Kromekote is a registered trade mark of the Champion Paper & Fibre Company)

PACKAGE ...
For SELLING POWER



LUSTEROID . . . the modern plastic containers for pharmaceutical, industrial and consumer products. Attractively colored — production labeled, each vial or tube makes an eye-catching, crystal clear or opaque product display. Lightweight LUSTEROID containers are unbreakable, crush resistant and inexpensive to use and ship.

STEP UP SALES . . . PROTECT PRODUCTS . . . REDUCE COSTS Send for brochure, samples and prices.

Lusteroid

CONTAINER COMPANY, INC.

30 WEST PARKER AVENUE

MAPLEWOOD

NEW JERSEY

J. C. Barey, R. Bernhard, Hotel: Palmer House.

DAVISA JOSEPH, PLASTICS CO. Booth 910. Exhibit of cellulose acetate and butyrate; samples of materials; examples of bubble packs. Personnel: L. A. Steinhardt, S. H. Shur. Hotel: Executive House.

DELAWARE BARREL & DRUM CO., INC. Booths 900, 901, 1000, 1001. Display of regular line of standard and lightweight drums; tanks from 5 to 550 gal. with open or closed head; new 5- and 15-gal. featherweight throwaway containers; new tote barrels; new linear tanks. Personnel: J. S. Heisler, J. Barber, D. Parrish, D. Anderson, G. Coughlin, R. Reuther, B. Loberman, Jr. Hotel: Conrad Hilton.

DEMUTH GLASS WORKS, INC. Booth 716. Joint exhibit with Brockway Glass Co., Inc., and Celluplastics, Inc., covering glass tubing and vials. Personnel: F. Britt, T. Reynolds, R. King, G. Thompson. Hotel: LaSalle.

DEPENDABLE COMPRESSOR & MACHINE CO., INC. Booth 218. Exhibit of screen printing machines for round and flat ware; new machine for printing round and square 1-gal. and 1-gal. plastic containers. Personnel: C. E. Eisen, A. Eisen, A. Broemel. Hotel: Ambassador West.

DIAMOND PLASTICS INDUSTRIES, INC. Booths 932, 933. Joint exhibit with Creative Packaging, Inc., and Paper Package. Co. featuring competitive packages, and new ideas and forms in thermoformed plastics, injection-molded plastics and paper. Personnel: D. B. Fobes, E. Garritson, M. deVietien, W. H. Cummings, T. M. Corey, R. Gayle, Hotel: Executive House.

DOBECKMUN CO., a Div. of The Dow Chemical Co. Booth 708. Several new packages and packaging concepts featured; heat-and-serve package meeting U. S. Quartermaster Corps specifications; examples of shrink packaging for produce, utilizing Trycite polysty-rene film; several Metalam packages featuring a new technique in reverse flexographic printing: N.F.P.A prize winners, including President's Award shampoo package; company's basic packaging materials. Personnel: J. G. Staudt, K. E. Prindle, R. S. Jones, R. A. Hickman, W. J. Bader, W. L. Lenox. Hotel: Morrison.

DOUGHBOY INDUSTRIES, INC. Booths 1025, 1027. Exhibit of automatic bag-top labelers; continuous band sealers for heavy-duty polyethylene; continuous packaging machine; also semi-automatic tube machine. Personnel: J. Grevich, J. Johnston, H. Weatherhead. Hotel: Palmer House.

DU PONT DE NEMOURS, E. I., & CO., INC., Cel-O-Seal and Vexar Div., Film Dept. Booth 542. Exhibit of on-the-market containers demonstrating use of Cel-O-Seal cellulose bands; uses for

Make them with . . They're the Two New Members of the Tipper Tie line of casing closure machines with a multiplicity of uses in packaging. SEE OUR EXHIBIT AT THE PACKAGING SHOW—BOOTH 917

automatically applied by

SINGLE HEAD TV CLIPPER *

Versatility in use and top speed in applying closures are advantages.

DOUBLE CLIPPER *

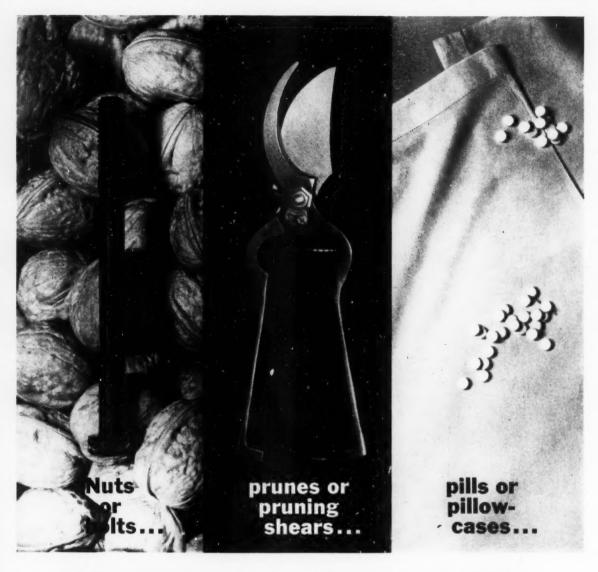
The only closure machine that will apply TWO tight seal Tipper Tie Closures at one time.

Tell us your closure needs. We will recommend, without obligation, the Tipper Tie Closure machine best suited for you.

TIPPER TIE, INC.

407-411 Chestnut Street ● Union, N. J. ● MUrdock 7-2345
*PATENTED U.S.A. — CANADA & FOREIGN

TIE-203



High-speed packaging for ALL with low-cost Kliklok

One of the St. Regis ways to Systematic Packaging —Look at all the things that now can be packaged—more profitably—with a compact Kliklok system from St. Regis®. You'll pack faster, more economically with the automatic operation of Kliklok machinery plus glueless, space-saving cartons. Printed box or plain, your package is firmly locked to assure rigid product protection, fewer "cripples."

The Folding Carton Division offers Kliklok machines in various models to suit individual product and production needs. Guaranteed for dependability, a Kliklok system also can be adapted to different sized cartons in as little as five minutes...adapted to pace your line at the tempo you



want. It's your all-around cost-cutter!

Kliklok is only one of the complete, modern packaging systems from the St. Regis Folding Carton Division. Systems designed to produce better packages at lower cost. Drop a line to the plant below nearest you. Specify what you make, and we'll send details on the best St. Regis way to improve your packaging systematically.

FOLDING CARTON DIVISION

St.Regis (R)

CARTON CRAFTSMEN, CHICAGO, ILL.
CORNELL PAPERBOARD PRODUCTS CO., MILWAUKEE, WISC
CROWELL CARTON COMPANY, MARSHALL, MICH.
DUBUQUE CONTAINER COMPANY, DUBUQUE, IA.
GREAT LAKES BOX COMPANY, CLEVELAND, O.
GULF CARTON COMPANY, PENSACOLA, FLA.
MIFTY MANUFACTURING COMPANY, BIRMINGHAM, ALA.
POLLOCK PAPER COMPANY, DALLAS, TEX.

Consider the possibilities of crystal clear flexible vinyl...



ZIPPER BAG

PRESTITE CLOSURE

Self Seal | Re-open Re-usable

- · DUST PROOF
 - · AIRTITE
- PACKAGE DEVELOPMENT
- CREATIVE ART
- PRINTING

20th century plastics, inc.

415 EAST WASHINGTON BLVD LOS ANGELES 15. CALIF. RICHMOND 7-5329 Vexar plastic netting, piping and sheeting in the food, cosmetic, produce, beverage, industrial and novelty fields. Personnel: M. V. Noble, T. W. Holland, E. A. Britton, H. E. Walthor, G. F. Sanders, E. V. Grandy, F. C. Wooten. Hotel: Bismarck.

DU PONT DE NEMOURS, E. L., & CO., INC., Film Dept. Booth 544. Exhibit highlighting technical and marketing experience of company packaging sales representatives; new and improved films, including nine cellophane types, several combination materials; wide range of properties offered by company films; examples of on-themarket packages illustrating broad packaging applications of company films. Personnel: R. R. Smith, R. C. Myers, H. D. Chickering, R. C. Krueger, N. Allen, A. J. Thompson, W. M. Farrelly, R. Kaffenberger, P. G. Stephan, C. L. Blair. Hotel: Bismarck.

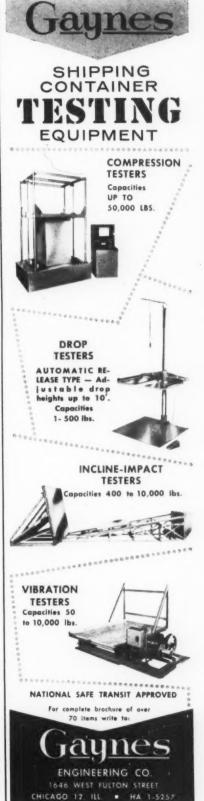
DURABLE INDUSTRIAL SUPPLY CO. (See Strapping Materials Co.)

DUSENBERY, JOHN, CO., INC. Booth 233. Display of slitters and rewinders; laminator; core cutters; trimremoval system. Personnel: J. Dusenbery, R. Young, J. Reinan, F. Brombacher, H. Hunt, W. Kroel.

EASTMAN CHEMICAL PRODUCTS, INC., Chemicals Div. Booth 711. Exhibit of hot-melt adhesives, including pelleted Epolene type C blends applied from melt tank or extruded for economical, high-speed sealing; high-gloss coatings of 20-40% Epolene in paraffin, providing new decorative effects with high protection; applied to cut sheets or webs, using versatile Steine-mann curtain coater, Epolene C blends decorate and protect corrugated board; paraffin modification, a new formulating approach based on use of two or more types of low-molecular-weight polyolefin resin to improve waxes for dairy cartons, etc. Hotel: Congress.

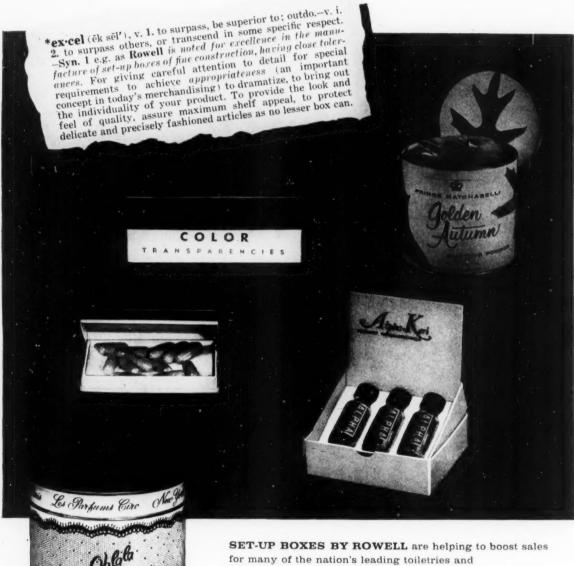
EASTMAN CHEMICAL PRODUCTS, INC., Plastics Div. Booths 612, 614. Several demonstrations on the use of Tenite plastics for packaging applications; also a static display. Personnel: D. C. Williams, E. C. Cathcart, J. T. Moore, W. P. Bussart, J. Adams, W. P. Gideon, V. Reisig, L. B. Connelly, W. F. Cooper, J. M. Lister, J. B. Williams, T. H. Howard. Hotel: Bismarck.

EASTMAN KODAK CO. Booths 523, 524. Exhibit of transparent packages fabricated and thermoformed from Kodapak I cellulose acetate, Kodapak IV cellulose acetate and extruded Kodapak II sheet cellulose acetate butyrate; new uses for plastic sheet and unusual applications for Kodapak sheet; also demonstration of versatility and high-speed-fabrication of Kodapak II sheet on Sundstrand Packmaster Model 58 forming blisters, automatically filling the cavities with Tenite plastic golf tees, printing and sealing the backing board [Continued on page 320]



Leading, Packagers know— Rowell excels* in Premium quality Boxes

--without added Premium Cost!



Cosmetic-padded top

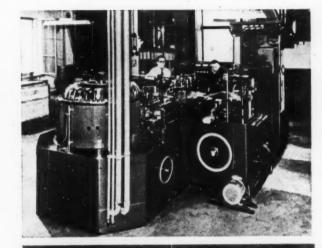
cosmetics, pharmaceuticals and precision products. A quality set-up box by Rowell can enhance your product, too. Let us make a complete analysis of your requirements. Call or write today.

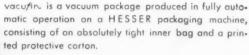
POWELL CO. INC. BATAVIA

Plant #1 Ellicott St. — Serving the Drug and Special Packaging Field Plant #2 Jefferson Ave. — Serving the Cosmetic Industry exclusively



sells for you - serves the consumer





Inner bag material is drawn from reel, printed outer carton blank is fed from the stack.

Free choice of suppliers for the packaging materials.

The vacu/fin-packaging machine is absolutely reliable and can be operated by one or two semi-skilled persons.

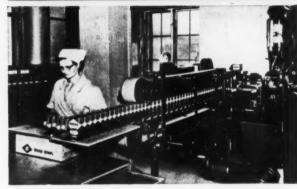
In case of volumetric filling invariably accurate weights can be ensured by means of an electronic check weighing and regulating device, built in on request.

Operating speed: up to 60 packages per minute.



in Germany, Finland, France, Holland, Italy, Norway, Sweden and the USA

for ground coffee, baby food, powdered milk, peanuts and other high grade products.



One of our customers wrote us:

"... The new vacuum package has been accepted by our customers so well that it is impossible to meet the demand satisfactorily on one machine. The prevailing situation is awkward and entirely unbearable for our company as we are not able to supply the quantities ordered (in this very case it is ground coffee)

... and therefore we have ordered another vacuum packaging machine..."

Since the INTERPACK Exhibition 1960, more than 20 vacufix - packaging machines have been ordered and those already supplied have most successfully proved themselves in continuous operation.

HESSER - Vacufin the vacuum package made in fully automatic operation.

For further information please contact

Diederichs & Griffin Comp., Chicago 48/JII.

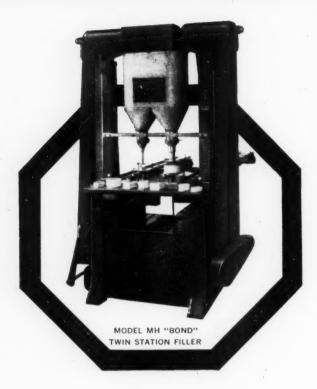
Geveke & Co., Inc., Elmsford/N.Y. James C. Hale & Co., San Francisco/Calif. Ed. A. Wagner & Ass.

Dallas/Texas

Packaging Equipment Service Ltd., Toronto/Ont.

Agencia Comercial Anahuac S. A. Hugo Schoener, Mexico D. F.

FR. HESSER MASCHINENFABRIK-AKTIENGESELLSCHAFT, STUTTGART-BAD CANNSTATT - FOUNDED 1861



Products and Containers Unlimited!

Drugs, chemicals, insecticides, cosmetics, spices, food products... fine powders, granules, grains... sticky powders or free-flowing materials... may be volume filled, gross weighed or packed — on the one machine — into almost any type or size of container, in weights from a few grams up to 10 lbs. or more. Running speeds up to 50 per minute with one operator. Other models available, semi-automatic and fully automatic. Write US for complete information.







U. S. AUTOMATIC BOX MACHINERY CO., INC.

122 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.
Branch Offices: New York • Chicago • Springfield, Missouri
James C, Hale Co., Los Angeles, San Francisco • R. S. Gold, Toronto

[Continued from page 317]

at approximately 300 in. per minute. Personnel: C. D. Snead, S. D. Osman, V. M. Howe, P. U. Braman, J. E. Gruntler, R. Caire, N. F. Phillips, F. C. Richner, W. Goodnow, T. Lyons, M. F. Tucker, W. J. Scaman, E. M. Drummond, J. B. Watkins. Hotel: Pick. Congress.

EKCO-ALCOA CONTAINERS INC. Booth 722. Demonstration of advantages of new heat-shrink film cover for aluminum-foil packaging; emphasis on the complete foil package in relation to variety of closure methods now available, including hermetically scaled, transparent plastic or board covered. Personnel: R. W. Simmons, J. Carlile, T. Leo, A. Moses, L. West, J. Fox, R. Gaulke, Hotel: Executive House.

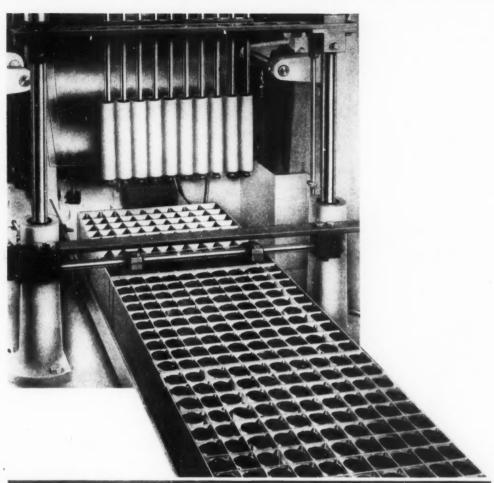
ELECTRONIC MACHINE PARTS, INC. Booth 136. Exhibit of registration-control equipment for special and standard converting, packaging and filling machines; "One Way" and "Two Way" correction units featuring single-component reflected light scanner and foil scanner, single-differential and double-differential transmissions, and 75-h.p.-differential transmissions for registry of pre-printed linerboard on corrugators. Personnel: W. T. McAdam, A. Handal, G. Geras, Hotel: Morrison.

EMHART MFG. CO., Portland Div. Booths 822, 823. Exhibit of Formatic 163 pressure former to make round. transparent containers of Plax Polyflex oriented polystyrene, with lids heat sealed by Formatic 164 heat sealer; Type 380-385 unscrambler and upender for orienting plastic bottles and aligning them in single line in upright position for delivery to fillers and other operations. Personnel: W. W. Lauer, L. E. Johnson, W. C. Lennon, T. W. Dickes, I. M. Amenta, B. Brandom, K. Holstebro, A. L. Johnson, C. R. Strehlau, E. B. Gardner, W. Morcom, J. Powers, Hotel: Palmer House.

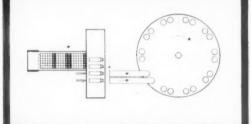
ENJAY CHEMICAL CO., Div. of Humble Oil & Refining Co. Booth 160. Exhibit featuring fully automatic injection-molding machine molding snap-fit calling-card file boxes for visitors with "living hinge" and three surface textures, using Escon polypropylene; distribution of snap-fit, strip-thread and conventional-thread closures. Personnel: R. L. Parkin, C. W. Virgin, J. A. O'Neill, R. W. Robinson, C. E. Waggner, C. E. Huxley, D. R. Hammel, W. J. G. McCulloch, C. W. Williamson, A. R. Gilden, B. Zurkoff. Hotel: Oxford House.

ERDCO ENGINEERING CORP. Booth 807. Exhibit of new model Clear-Pak blister sealers. Personnel: J. S. Bogen, J. Cryder, W. Huntsha, D. Kerwin, J. T. Shartle.

ERIEZ MFG. CO. Booth 326. Display of complete line of magnetic Separation, MacNamation and Hi-Vi electro permanent-magnetic vibratory feeders and bin vibrators; new Model HS-20







150 collapsible tubes per minute are pneumatically taken out of the partitioned supply carton, sucked clean, filled and closed. Fully automatic method of operation from the empty tube to the ready-made sales package. Daily output: 70-80.000 tubes with one operator only. For this reason highest economy.

Filling range: up to 200 cc. Maximum tube diameter: 35 mm (1.3/8"). Clear design, quick change over, air bubble free filling, clean tube closure, elegant appearance.

In combination with the -MfM- High Speed Cartoner—the ideal production

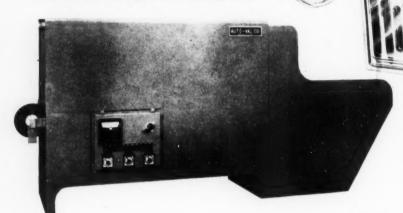


INDUSTRIE - WERKE KARLSRUHE Aktiengesellschaft · KARLSRUHE

Correspondent's office: H. J. Jensen 350 Broadway, New York 13, N. Y.

Blister Packs.

THERMOFORMED IN TRANSPARENT PLASTIC





AUTO-VAC PAK MASTER

offers automatic thermoforming, indexing and cutting in a continuous roll-fed operation. Blister forms acctate, butyrate, styrene, polyethylene, vinyls and other thermoplastics in 12" to 22" width rolls.

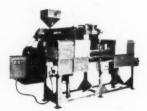


Blister pack, bubble pack or dome pack, however you term it, thermoformed transparent packaging offers such a host of advantages that it has become an important packaging form. Auto-Vac has pioneered in the design and development of successful production thermoforming equipment and has made major process technique contributions that are now standard in the industry. Auto-Vac's engineers welcome inquiries about your thermoforming problems.



AUTO-VAC TRIM PRESS

an automatic 40-ton hydraulic die cutting unit that may be integrated with your automated production line. REPRESENTATIVES OF THE AUTO-BLOW CORPORATION WILL BE ON HAND TO DIS CUSS AUTOMATIC BLOW MOLDING EQUIPMENT.





DIVISIONS OF NATIONAL CLEVELAND CORPORATION
450 KINGS HIGHWAY CUTOFF, FAIRFIELD, CONNECTICUT
PHONE EDISON 4-9481

Hi-Speed feeder. Personnel: C. F. Giermak, N. Hirt, R. W. Shively, P. Barkley, E. Sickmeyer. Hotel: Palmer House.

ERRICH INTERNATIONAL CORP. Booth 110. Display of Speedy Auto-Bag sealers; Speedy bag packagers; also latest bagging and sealing machinery, both automatic and manual. Personnel: M. L. Ruderman, W. Iler, H. Bitterman, H. Gore. Hotel: Palmer House.

FAUSTEL, INC. Booth 185. Display of new line of modular flexographic units for low-cost multicolor printing with separate pre-drilled frames for simple mounting of up to six additional colors, which can be used in a complete roll-to-roll operation or as tail-end press; drying unit for web-ted presses demonstrating action of uniform impingement system of air across entire width of a printed web. Personnel: E. S. Faulls, W. R. Stelling, R. E. Kent, E. P. Gaspardo, P. M. Fahrendorf, D. O. Narten. Hotel: Palmer House.

FELINS TYING MACHINE CO. Booth 343. Demonstration of various models of Pak Tyers for tying bundles, boxes, packages and nursery stock; new machine that operates from right to left, rather than regular left to right. Personnel: H. Kohler, W. McCambridge, D. Larson, E. Hoganson, R. Gould. Hotel: Congress.

FIFE MFG. CO., INC. Booth 231. Completely new line of automatic webguide power units; new Model P.25 air-pressure power unit will be in operation on a model rewinder, illustrating two applications of automatic webguiding: how to correct a badly telescoped roll of material. Personnel: I. L. Fife, D. G. Fife, C. W. Brown, B. A. Feiertag, N. E. Casida, W. C. Fife, D. D. Paulson, R. L. Fife, N. Lippucci, W. A. Shilling, F. C. Ames, J. F. Slaughter, H. Carver. Hotel: Conrad-Hilton.

FINDLEY, F. G., CO. Booths 1049, 1050. Joint exhibit with Southern Adhesives Corp. and Union Paste Co., featuring advantages offered by wide range of packaging and converting adhesives; representative packages, packaged items and converted products on which adhesives are used; technical data on adhesives; recently developed polystyrene foam laminating adhesives, heat-seal adhesives, and hot melts. Personnel: C. Bickel, O. Bronn, H. Fedler, R. Findley, E. Tatro, H. Wimmer, R. Crowell, G. Rilee, A. B. Crowell, Jr., B. Rader, T. Seaver, F. Sebbard. Hotel: Lake Tower Motel.

FISCHBEIN, DAVE, CO. Booth 1043. Exhibit of new Model D portable bag closer; also new model NA-6 automatic bag-closing machine for small paper bags. Personnel: G. Fischbein, S. Shark, Hotel: Palmer House.

FLEX-O-GLASS, INC. Booth 701. Entire line of Flex-O-Film specially devel-[Continued on page 326] Hamersley
GLASSINE GREASEPROOF
PAPERS PROTECT

... work best for you

if there is

OIL; GREASE or FAT

in your products



What's New in Packaging?

PLASTOFILM offers
you ideas, unusual
and imaginative, to
increase your sales.
Our creative design
and progressive manufacturing are as close
as your phone or writing
desk. Contact us today for
a distinctive package to sell
your product.



MERRILL MFG. CORPORATION'S CARDED BLISTER PACK FEATURING . . .

- Fully protected merchandise in a factory sealed package,
 - Handy and easy opening.
 Foolproof reclosure.

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916 WEST UNION DEVENUE, P.O. BOX 531, WHEATON, ILLINOIS

How a manufacturer of paper containers



N&W

NORFOLK and WESTERN RAILWAY Nation's Going-est Railroad



Fantus Area Research proves it, in their analytical survey of N&W territory. Here's how:

Fantus studied markets, labor, raw materials, taxes, industry trends . . . every facet of plant location. This study revealed sites that offered unique opportunities for a sanitary paper food container plant. Next, Fantus made detailed estimates of what it would cost to operate container plants at these sites. The figures were compared with actual operating costs of similar plants now serving this area from other parts of the country. Result: at the N&W sites a sanitary food container plant can save \$342,600 per year in transportation plus other annual savings of \$156,000.

For full facts, write on company letterhead to H. P. Cotton, Assistant Vice President, Norfolk and Western Railway, Roanoke, Va.

MANY OTHER TYPES OF INDUSTRY can slash operating costs with plants in N&W territory. Fantus proves it in dollars and cents.

OWEST COST

CLOSURES

come from forming your own WIDE-CROWNS FROM A COIL



Stitching over 500 boxes per hour is no strain for one man, thanks to the combined talents of high-speed Acme Steel Stitching Machines and stitch-saving wide crown design. Feeding from a continuous coil of wire, the machine cuts the wire . . . forms it into 11/4" wide-crown staples . . . drives them quick as a flash.

Lowering your wire costs is a double-sure cinch.

- 1. Since you form your own staples, you pocket the extra money you're now paying for expensive pre-formed staples.
- Acme Steel's exclusive "Arcuate" wide crown stitch design affords the economy of lighter gauge wire. Yet, it assures the closure strength of heavier gauges.

These boxes typify the savings you can expect with wide crown design. Only half, or less, the number of 14" wide crowns do the job of conventional narrow crowns.

Have your local Acme Idea Man explain in full the savings potential of wide crown stitching in your operation, or write: Acme Steel Company, Dept. MFW-41, 135th St. and Perry Avenue, Chicago 27, Ill.





Approved for Uniform Freight Classification Rule 41 and by the National Container Committee.

ACME STEEL STITCHING

NEWEST IN PACKAGING!



If it can be broken, bruised, crushed or scratched...

cradle your product in luxurious, cushion-soft Satin-Pak

TRAYS - PLATFORMS - INSERTS
Made from extruded, expanded polystyrene foam*

Perfectly formed to the exact contours of your product, new Satin-Pak cradles it gently ...firmly...providing safe journey right to the point of sale! Ranging from tissue-thin to extra thick-within the same unit-SATIN-PAK walls protect your product with both soft cushioning and rigid strength as needed. Whether your product travels best in a tray, a box insert, or a complete, selfcontained package...new SATIN-PAK gives it to you, in pure white or lively, lustrous colors that add sales appeal and make striking displays. SATIN-PAK's greater protection lowers product losses (it's completely grease resistant) and saves on shipping costs because Satin-Pak is so light.

BULLETIN!!! White SATIN-PAK is F.D.A. approved for direct-contact packaging of foods, drugs and cosmetics.

See for yourself how versatile new SATIN-PAK enhances any product package... excites more impulse sales.

VISIT BOOTH 201 at the 30th National Packaging Exposition in Chicago April 10-13

We've an exciting
FREE SATIN-PAK GIFT
waiting for you!

"XAN-FOAM, A PRODUCT OF DYNA-FOAM CORPORATION

PACKAGING COMPONENTS, INC. 171 Madison Avenue, New York 16, N.Y. MUrray Hill 9-7665 [Continued from page 323]

oped for skin packaging, blister packaging and vacuum forming on display; also clear butyrate, rigid and flexible vinyl, industrial and overwrap polyethylene, and Poly-Skin for skin packaging. Personnel: K. I. Morris, K. Fogelberg, J. Kraft, C. Waddell.

FOAMPAK CORP. (See Packaging Components, Inc.)

FOOD & DRUG PACKAGING MAGAZINE. Booth 125. Personnel: D. Gussow, B. Gussow, H. Friedman, T. Clarke, J. Frango, J. Mittag, D. Raffles, L. Centor. Hotel: Sheraton-Blackstone.

FOOD MACHINERY & CHEMICAL CORP., Hudson-Sharp Plant. Booths 827, 828, 829, 831. Display of new Campbell wrapper shrink-wrap machine which automatically forms, seals and shrinks film around a variety of product shapes and sizes at speeds up to 60 per minute, can wrap multiple containers and handle polyvinyl chloride, polyethylene and most other shrink-type films with web widths up to 18 in. Personnel: W. R. Huguenin, A. J. Olsen, R. E. Jansing, C. J. Gerlack. Hotel: Morrison.

FOOD MACHINERY & CHEMICAL CORP., Kingsbury & Davis Plant, Booths 827, 828, 829, 831. Exhibit of transparent-lid forming machine which shapes and seals both acetate and polystyrene lids at 1,500 to 1,800 per hour, producing either regular or beaded-edge boxes from pre-cut blanks 4 by 3 in. to 19 by 14 in.; Model EQ thermoplastic quad stayer which automatically forms and applies corner stays to setup boxes using single master shaft to control all machine functions. Personnel: W. R. Huguenin, P. D. Bell, W. F. Andresen. Hotel: Morrison.

FOOD MACHINERY & CHEMICAL CORP., Simplex Plant. Booths 827, 828, 829, 831. Exhibit of Model 210 bag maker which has twin folding unwinds and split draw-rolls to produce side-weld bags from two separate printed webs at speeds of 170 to 200 per minute, making flat or gusset-bottom bags up to 30 by 40 in. from printed polyethylene tubing, folded film or flat stock. Personnel: W. R. Huguenin, G. C. Jones, M. W. Smith, J. D. Hoffman. Hotel: Morrison.

FOOD MACHINERY & CHEMICAL CORP., Stokes & Smith Plant. Booths 827, 828, 829, 831. Exhibit of new Stokeswrap Model CS pouch maker which automatically forms, fills and seals pillow and four-seal-type pouches from roll stock, can handle all types of heat-sealable films, papers, foils, etc., with quick change-over from impulse to conventional seals in package sizes up to 8 by 1412 in. or 200 cu. in. at speeds up to 150 per minute, and on which two different products, films, speeds or package sizes can be run simultaneously; also new Model 600 high-speed check weigher which can handle open jars, bottles, cans, cartons,



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Yes, at last, a BIG press for display printing on corrugated in short or long runs with minimum make-ready and economical operating cost . . . a press that brings new appeal to packages and displays, and new economy to corrugated package production. Model 64 handles sheets up to 44" x 64" at any speed up to 2000 sheets per hour. It's fully automatic from feed to delivery . . . with all push-button finger-tip controls located on one central panel. Has all the latest advances in press design, such as positive vacuum tape delivery system, stepless speed electronic drive and vacuum cyclinder impression principle. No other printing method is as versatile as screen process . . . and no other press can bring the full brilliance of silk screen printing to your corrugated packages . don't consider any new equipment until you've seen the new General Model 64!



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National Packaging Exposition—Chicago

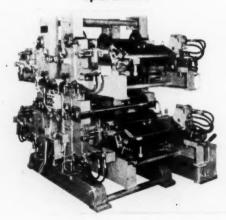
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> > Numerous combinations of the Cub-Line equipment are available to serve all your printing requirements.

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flexible pouches and bags up to 3 lbs. at speeds up to 300 per minute. Personnel: W. R. Huguenin, J. R. Sonneborn, J. Y. Albertson, S. T. Brinton, R. C. Smith. Hotel: Morrison.

FORBES LITHOGRAPH MFG. CO. Booth 903. Creative designs and constructions in flexible packaging, labels and cartons emphasized; also featuring Advise top-grip carrier; new beer carrier; new display shipper constructions; close register P.M.C. die-cut labels; multi-phase operation with complete packaging facilities' and equipment for development and production stressed. Personnel: R. M. Lawrence, V. C. Lanigan, L. A. Delsen, Hotel: Drake.

FRANK, WALTER, ORGAMIZATION, Booths 121, 122. Use of color and design in plastics as a replacement for glass featured; new captive closures; custom package and product design, and specially designed components; new trends, Personnel; W. Frank, J. N. Michell, J. G. Reidy, A. Reynolds, R. Richards, M. Jones, A. Rupp, C. Kotecki, J. Eder, J. Gardner.

FRAZIER & SON, Booth 826. Exhibit of automatic materials-handling and filling equipment for free-flowing, nonliquid products; Whiz Lifter elevator-feed conveyor; floor model Whiz Packer volumetric filler. Personnel: R. Frazier.

FULLER, H. B., CO. Booth 243. Exhibit of specific adhesive products to be used for a variety of packaging applications; illustration of synthetic resin #1555 with wide use for gluing in folding-carton industry; free catalog available discussing adhesives in various applications, Personnel: E. A. Vigard, H. B. Fuller, Jr., J. J. McIntyre, J. A. Watt, R. B. Jamison, W. Oliver, R. Sanders, J. Mead, T. Kane, B. Gay, E. Heinrichs, Hotel: Sherman.

FULTON MACHINE CO., INC. Booth 288. (See Crandall, Inc.)

GPE CONTROLS, INC. Booth 621. Web-guide controllers in operation; web unwind, rewind and between-stands steering; photo-electric-hydraulic and air-hydraulic sensing of web position; line follower for positioning web with respect to printed line; slow-motion steering-roll demonstrator for illustrating principle of operation; air-electric switches for proximity measurement; also light-duty unwind stand for automatic guiding. Personnel: E. H. Schroeder, W. J. Main, J. M. Deering, S. L. Sorsen, G. Baxter, D. B. Digel, W. Mueller, T. Lasiewicz, W. W. Wheeler, J. B. Lohr, H. Fein, J. Ochaba.

GARDNER DIV., Diamond National Corp. Booths 804, 805, 806, 903, 904, 905. Exhibit of folding packaging developments and materials; new boards, including gold and silver metallicoated boards; new Jet Stream and Silk Stream boards; new types of con-[Continued on page 332]

NOW...<u>many new fields</u> package in popular folding and set-up boxes

DISCOVER MANY DIVERSIFIED APPLICATIONS OF VERSATILE, FULLY AUTOMATIC INDIVIDUAL MACHINERY & COMPLETE PLANTS FOR CARDBOARD & PAPER CONVERTING . . . for the manufacture of single box parts for cutting, creasing, scoring of box components, (e.g.): blanks for box bottoms, box tops, collars, paper covers, etc. . . . for assembly of banded and covered shoulder-type boxes . . . for the manufacture of special slide and shell boxes . . . for the manufacture of special slide and shell boxes made from one blank.

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lock tight handle impulse sales no machinery no heat no tape slip proof air tight reusable seals two packs one sealer eye appeal easy to carry large handle low cost strengthens bag freezer perfect eye-catching displays colors four or five seconds to apply



(produce)

(toys)

(tie-in)

We are selecting qualified distributors in various territories at this time. (Bag manufacturers only.) Listed at right are a few of our principal distributors.

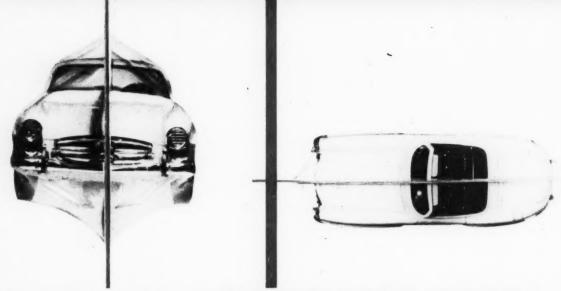
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CORPORATION, FAIRBORN, OHIO

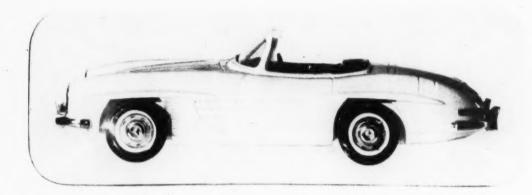
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"A Positive Seal—A Perfect Handle" WITH A THOUSAND REUSABLE USES

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Hubley Manufacturing Company did...and now many of their 1961 toys are being packaged in this sparkling new medium. STRETCH-PAK is geared to modern merchandising methods...it provides a visually perfect setting for your product—it allows sufficient space for advertising messages—it can be designed for rack or countertop display. Look into STRETCH-PAK for your product. Visit Booth #1117 at the A.M.A. Packaging Exposition to see STRETCH-PAK packaging in operation.

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- ☐ Embossed Seals and Labels with per-manent-type pressure sensitive adhesive Seals and Labels−embossed with heat-seal adhesive
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- Heavy Metal Seals and Labels
- Labels with Della Robbia Finish
- ☐ Embossed Tags—single faced and double
 - Name Plates with Girder Adhesive Heat Activated Gutta Percha or P manent Pressure Sensitive.

[Continued from page 329] struction for folding cartons. Personnel: C. F. Lloyd, T. C. E. Ecclesine, W. E. Gardner, W. J. Duggan, A. Gardner, S. V. Gardner, B. B. Martin, R. D. Williams, Hotel: Blackstone.

GAST MFG. CO, Booth 1100. Demonstration of integral rotary vacuum pumps, with built-in motors-light-duty rotary vacuum pump, below 15 in. Hg.; heavy-duty rotary vacuum pump for up to 28 in. Hg. continuously. Personnel: W. E. Gast, H. Robandt, M. A; Rhoads.

GENERAL CHEMICAL DIV. Allied Chemical Corp. Booths 913, 914. Genetron aerosol information headquarters: Aclar fluorohalocarbon film featuring transparency, virtually zero moisture absorption and good impact strength; also nylon films.

GENERAL RESEARCH & SUPPLY CO. Booth 920. Exhibit of "Series 60" General high-speed, fully automatic screen-process printing press for colorful and eye-catching printing effects on corrugated boxes, cartons or displays using fluorescents, metallics, unusual overprints, glitter, flock in a wide range of colors, plus special coatings and adhesives. Personnel: J. A. Black, H. J. Nies, F. Porth, J. Mann, T. Rosema.

GERRARD, A. J., & CO. Booth 427. Introduction of new air-driven straptensioning tool with automatic seal-feed that tensions, seals and scores strap in less than a second. Personnel: Wenk, H. C. Deifenderfer, O. Ritchey, W. Downing, R. Broughton, J. Senesac.

GIBBS AUTOMATIC DIV., Pierce Industries, Inc. Booth 140. Display of conventional and novelty-type plastic containers and flower pots. Personnel: R. K. Gibbs, A. J. Baumeier.

GLASSINE & GREASEPROOF MFRS. ASSN. Booths 1013, 1018, Exhibit of wide variety of packages using glassine and greaseproof papers for protection against grease, moisture, aroma and flavor; samples of glassine and greaseproof papers; Dr. Laurence V. Burton, independent technical consultant, on hand for technical advice.

GLOBE INDUSTRIES, INC. Booth 166. Display of a new development in highspeed blister-sealing equipment for acetate and vinyl, Personnel: M. Wigelman, H. Burr. Hotel: Conrad-Hilton.

GOODYEAR TIRE & RUBBER CO. Booth 541. Display of a variety of Pliofilm packages demonstrating wide difference of characteristics among various types of Pliofilm from low-watertransmission N2 types for dehydrated foods to high-breathing SS75 for fresh meats; Vitafilm packages of textiles, games, toys, paper products, hardware and industrial items showing film's strength, clarity and machining characteristics; recently introduced foodapproved Vitafilm for cheese, produce, frankfurters, bacon, etc.; also technical assistance available on machinery, ...One of the few

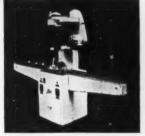
"containers" an **ALITE** machine doesn't fill!

But keep in mind: "If it's pasty, powdery and pours, there's an Alite to do the pouring." Drugs in 8-milligram vials... mustard in 3-pound tins... make-up in compacts... flour in 2-pound bags... you can put virtually any-type product into any-type package with a specially designed Alite machine. For example:



Fills up to 1200 powder compacts per hour. Arenco-Alite A. T. 5 powder-compressor is fully automatic, dispenses any powder concentration evenly, accurately. Pressure completely variable from 40 to 1000 psi with merely the turn of a knob. Handles any-size compact from 1"-4", requires no air supply or other "extras."

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NEW KNOWLTON SQUARWIND

Versatile Square Spiral Tube Winder

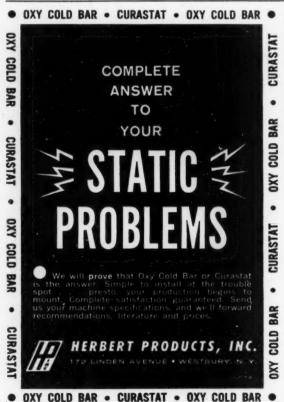


The new Knowlton Squarwind produces square or rectangular spiral wound tubes continuously and is available in two models. Model No. 1 has a range from 3/8" to 1" square; Model No. 2 range is from 1" to 2" square. Square, rectangular and various irregular shaped mandrels can be furnished.

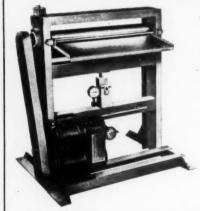
Squarwind will produce tubes with sharp inside corners. It will handle materials other than paper that have the proper flexibility and forming characteristics. From two to seven ply can be handled on the Squarwind.

Production on Model No. 1 is from 15 to 20 lineal ft. per minute; Model No. 2 gives 20 to 25 lineal ft. per minute.

Squarwind winding mandrels are made to exacting Knowlton specifications for each type and size tube required.



Production Perforator



Designed for high-speed perforating of:

Kraft board Coated cardboard Corrugated cardboard Paper Film Many other products

IDEAL FOR SKIN PACKAGING OPERATIONS. Easy to operate. Standard machines available in roll widths of 33", 48" and 60". Needle points on perforating roll come on standard square patterns of 1/8", 3/16" and 1/4" centers.

Our Main Perforator, with needle points, produces boards with minute, round, almost invisible holes that allow maximum air passage with minimum vacuum . . . make for better appearance, too! Easy-to-replace points in roll are alloy steel and will last for "millions" of holes.

Our years of experience in needle roll and machinery production are behind the manufacture of our Main Perforator. For complete information, send today for brochure #202.

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printing, laminating and film recommendations. *Personnel:* J. S. Bruskin, A. F. Thomas, E. H. Dours, J. J. Tiernan, E. C. Randall, C. E. Hixson. *Hotel:* Congress.

GOTTSCHO, ADOLPH, INC. Booth 821. Display of production-line attachments for automatic coding and imprinting of cans, jars, bottles, shelf cartons, boxes, shipping cases, bags, wraps, pouches, strip-packs, paper containers, etc.; new 251 Rolacoder, air-operated side and rear-end case coder; new 160-34 Rolacoder, automatic consecutive-numbering machine for cartons carried by conveyors and case sealers; 1270 and 1280 Rolaprinter imprint attachments for cartoning machines; also VMM Markoprinter, high-speed variable-word box-end printer, Personnel: I. Gottscho, F. Meninger, L. Talarico, H. R. Lamken, J. Madden, D. Webster, N. Golbin, P. Schroeder, P. Wilson, W. Tofel, B. Miller, D. Miller, D. Larson, B. Williams.

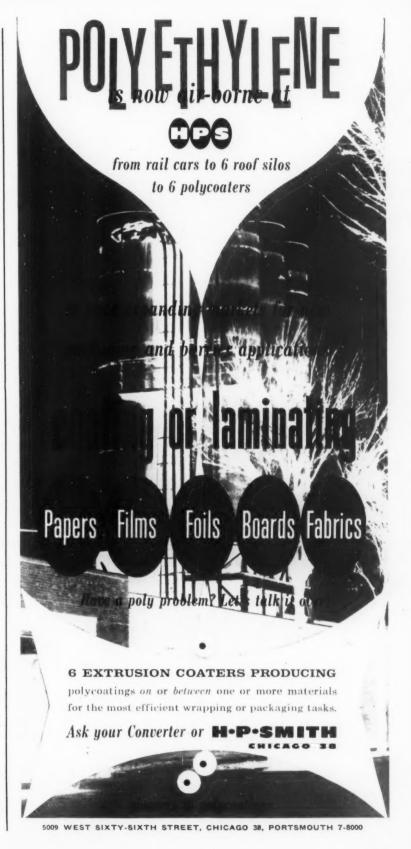
GRACE, W. R., & CO., Polymer Chemicals Div. Booth 626. Exhibit of low-medium and high-density polyethylene and polystyrene in film, blown bottles, injection-molded containers, closures and carrying devices; thermoformed packages, counter displays and carrying devices. Personnel: T. T. Miller, E. E. Winne, R. G. Biondi, H. R. Bishop, G. C. Heldrich, A. J. Buselli. Hotel: Executive House.

GRAY CO., INC. Booth 911. Display of stainless application of pumping equipment: automatic precision dispensing and timer systems; pumps for high-volume transfer where multiple outlets are involved or where there is need for long supply lines. Personnel: H. A. Murphy, Jr., D. T. Ottenweller, H. Osborne, B. Tobey, F. Cox. Hotel: Executive House.

GREAT LAKES STAMP & MFG. CO. Booth 268. Demonstration of manual and semi-automatic packaging equipment for heat sealing and labeling; dry-heat, turbulent-air action, film-shrinking tunnel; right-angle trim sealers; Electromatic Stackrite slicer. Personnel: J. H. Payton, R. H. Skadow, W. Payton, G. Haskell, B. Katz, A. Arnold, H. Munn.

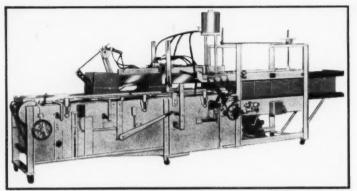
GREIF BROS. COOPERAGE CORP. Booth 1237. Display of new "FF" Lok-Rin fibre drum equipped with a rugged, non-corrosive, molde-l fibre, resin plastic laminated, fitted and securely closed with metal rim and locking lever and having an all-fibre interior made in assorted diameters and heights from 6- to 70-gal. capacities, holding up to 550 pounds. Personnel: F. K. Duffy, F. T. Deahl. Hotel: Palmer House.

HAMPTON MFG. CO., Industrial Tape Div. Booth 236. Exhibit of Blue Cross pressure-sensitive industrial adhesive tapes, including those conforming to Government specifications; new cloth and new paper double-faced tapes; new [Continued on page 338]



APRIL 1961

More companies are choosing National Short Case Sealers



Leading users of National Short Case Sealers are Goodyear, Lever Bros., Schrafft's, General Electric, Borden Co., Philco and a host of others.

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Polychrome's Granekote plates work particularly well with Lithoflex inks in this area because their uniform mechanically grained surface lets you run with a minimum of water and ink, preventing color streaks. It lays down a thin, smooth ink film that gives true reproduction fidelity. With a thin ink film you minimize the chance of one sheet offsetting to another, or of sheets sticking together.

Write for more information on how Lithoflex and Granekote can help solve your "difficult surface" problems, and also receive a free stainless steel ink knife.

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MARLEX*... for quality packaging with greater sales appeal!

Which of these modern packages is right for your product? Whether it's a blow molded bottle, extruded tube, film overwrap, a thermoformed or injection molded container; the result will be increased sales appeal with a package made of MARLEX plastics. Attractive appearance . . . excellent feel are two reasons. Wide temperature range is another. MARLEX high density polyethylenes and ethylene copolymers withstand temperatures from 250° to -180° F. Alka-

lies, acids, chemicals, oils and greases are no problem. And MARLEX is odorless, tasteless, non-irritating, and biologically inert.

To packagers, the high quality of MARLEX resins means truly efficient package production . . . easier printing, wrapping, filling, sealing. With MARLEX you're sure of package performance . . . verified and supported by extensive research data.

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TAKE HOME CARTON

Sharp, true-to-life reproduction of attractive designs, or hard hitting sales messages on your corrugated containers mean new and profitable merchandising opportunities . . . at the lowest possible cost.

Single to multi-color photographic reproduction, superior board surfaces, new die mounting systems, improved inks and printing dies give you added sales promotional power.

The container shown, for example, was printed at high speed on a printer-slotter using Matthews extra quality Line-Tone dies, which make fine, line screen reproduction possible.

Let Matthews help put more sales appeal into your shipping container program. Call your Matthews man or write for your copy of the informative brochure, "National Advertisers Service."

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BOX DIE VISION

BOSTON CHICAGO CLIFTON JACKSONVILLE PHILADELPHIA PITTSBURGH ST. LOUIS (RUB-R. ENG. CO.)

[Continued from page 335] silver polyethylene-coated cloth tape; printable grade flatback paper tapes; regular line of crepe and flatback tapes. Personnel: C. I. Lee, N. G. Dales, R. N.

Balkind, J. G. Dales, K. S. Goding, R. Baumrucker. Hotel: Lake Towers

HARRIS-SEYBOLD CO./Cottrell Co., Div. & Sub. of Harris-Intertype Corp. Booths 142, 143, Personnel in attendance with information on Harris offset presses, Harris folding-carton offset presses, metal decorating presses, Seybold cutters and mill trimmers, Cottrell web-feed roll-to-sheet feeders, Stevens material-handling equipment, Goebel slitter-rewinders, Lee flexo-graphic presses. *Personnel*: E. P. Nalley, R. H. Randall, R. T. Cookingham, R. J. Vennard, R. W. Rosebury, S. C. Saunders, D. Cottrell, Jr. Hotel: Palmer House.

HAYWOOD PUBLISHING CO. Booth 350. Exhibit of company publications including Consumer Packaging, Industrial Packaging and Boxboard Containers; also sound-film strip of packaging from field to shelf. Personnel: M. Havwood, Jr., L. B. Bergstrom, M. O. Pottlitzer, J. Dunham, J. A. Weber, D. Dean, T. Gillies, N. A. Olson, T. R. Warren, J. J. Halloran, T. Rickard.

HEDWIN CORP. Booth 709. Exhibit of 15- and 5-gal. Cubitainers with Ricke FlexSpout closures; 5-gal. Cubitainers with wirebound boxes; 5-gal. Cubitainers with screw-cap closures; 5-gal. Cubitainers with plug closures; 212-gal. Cubitainers; 5- and 1-Imperial-gal. Cubitainers. Personnel: B. N. Harris, Jr., C. A. Speas, E. B. Edwards, R. C. Smith, A. M. Taliaferro, G. M. Jewett. Hotel: Palmer House,

HEIDELBERG EASTERN, INC. Booth 424. Exhibit of 22-by-3014-in. Original Heidelberg rotary and flathed two-color press printing an actual carton job in two colors, one time through press, with printed sheets taken to 22-by-3014in. OHC cutter and creaser to die cut cartons; Original Heidelberg registering table for accurate positioning for rotary and flat plates off the press. Personnel: W. P. Lauffs, J. B. Haworth. W. J. Savage, W. B. Gould, E. B. Goethe, *Hotel*; Bismarck.

HEINRICH EQUIPMENT CORP. Booth 931. Exhibit of Lilliput narrowwidth flexographic roll press as complete packaged-unit flexographic-press installation; also latest model Alina-X-30 flexographic tail-end printer. Personnel: K. R. Sunderhauf, H. P. John. P. E. Martin, M. Schaule, A. Finke. Hotel: Bismarck.

HERBERT PRODUCTS, INC. Booth 184. Demonstration models of various styles of latest static eliminators, ionizer cleaners (for sheets and webs) and drying units. Personnel: W. F. Yahnker, O. L. Smith, J. D. Brown. Hotel: Palmer House. [Continued on page 340]



...the tough new polypropylene film

Here are some of the reasons why the big swing is to Olefane for more efficient food packaging:

SUPERIOR MACHINABILITY. Olefane has just the right stiffness and slip for smooth, swift machine operation. Runs with fewer rewraps. And, it has a non-critical heat seal range.

SUPERIOR PROTECTION. Olefane's superior moisture resistance keeps foods fresher longer—cuts stale returns. Does not become brittle or deteriorate in storage—resists tearing and abrasion.

SUPERIOR SALES APPEAL. Olefane is sparkling, crystal clear. Neither too limp nor too stiff. Shows off foods to their best advantage. Prints beautifully.

MORE ECONOMICAL, TOO. Olefane has the highest yield of any packaging film. Better performance at lower cost.

Olefane is being used in new packaging applications every day—from foods to lampshades. New production facilities, now under construction, will soon be ready to meet the growing demand for this versatile new packaging film. Send for Booklet AO-100, giving complete information on Olefane.

AVISUN CORPORATION Dept. 515 1345 Chestnut St.

Philadelphia 7, Pa.



Plastic Extruded Tube

CONTAINERS

in a LARGE SELECTION of

Stock Diameters

available to you in

ANY LENGTH

with screw caps, colorful friction or hang-up closures*

D E*C O R A T E D in as many as 4 colors

FLEX CONTAINERS

are custom made to your exact length requirements, to suit your product perfectly, from modest quantities to large volume runs . . . at no mold or tooling costs to you!



We offer you our extrusion and closure molding facilities for your special packaging requirements and invite your inquiries.

*PATENT PENDING

Write for free samples and catalog

Flex

PRODUCTS CORPORATION

231E MEADOW ROAD
ROUTE 17 RUTHERFORD N. J.

[Continued from page 338]

HOLLANDER, ALLEN, CO., INC. Booth 235. Exhibit of Dayglo and multicolor foil pressure-sensitive labels; Able-Stik, two-way dispenser to handle rolls or fanfold pressure-sensitive labels; complete line of labels and tags. Personnel: M. F. Antoville, R. Fagan, W. McCarty, C. Gildehaus, Hotel: Sheraton-Black-stone.

HOLLINGSWORTH & WHITNEY DIV., Scott Paper Co. Booth 1211. River showboat theme featuring Expanda-Kraft extensible paper; also other types of converting paper used in wide range of packaging. Personnel: J. B. Cowie, C. J. Dynes, T. G. Curtis, G. W. Ross, D. I. Harmon, A. E. Goldbeck, J. J. Penhaker, R. R. Tate, J. R. Dawson, P. E. Heims, H. W. Sterritt, R. A. Conover, Hotel: Ambassador.

IDEAL STENCIL MACHINE CO. Booth 149, Exhibit of new Mark V Junior automatic stenciling machine weighing only 20 lbs. that stencils an area 3 by 8 in.; re-engineered Handy Tear Tape dispenser capable of handling reinforced tapes as well as other types; improved 200-E Clip-A-Tape with nylon bushings and bearings. Personnel: C. Taylor, R. Hilgard, C. Rapp. Hotel: German.

IDEAL STITCHER CO., Div. W. R. Pabich Mfg. Co., Inc. Booth 216. Carton stitching and stapling machines on display; also carding machines and special stitcher applications. Personnel: W. R. Pabich, Robert W. Pabich, Richard W. Pabich, C. A. Sieracki.

IDEAL TAPE, INC. Booth 117. Regular line of industrial pressure-sensitive cloth and paper-backed tapes, including new glass-reinforced-paper strapping tape, printable colored flatback packaging tape, new production-grade-paper masking tape, No. 300. Personnel: H. A. Garfield, B. A. Garfield, C. Bucario, E. V. Stevens, Hotel: Conrad-Hilton.

IMPACT-O-GRAPH CORP. Booth 501. Exhibit of a full line of omni-directional impact recorders to determine what happens to a product in transit as an aid in reducing packaging cost. Personnel: W. S. Mielziner, T. E. Neal, A. E. R. Peterka, J. B. Hickox. Hotel: 50th-on-the-Lake Motel.

INPAK SYSTEMS, INC. Booth 1215. Production demonstration of stretch packaging. Personnel: N. Shippee, W. Crane, W. Lawson.

INTAGLIO SERVICE CORP. Booth 511. Visual display featuring various steps and methods in gravure processof engraving copper cylinders and flat plates; multicolor printed paper, board, cellophane, foil and plastics. Personnel: L. S. Pinover, O. S. Haverfield, R. McMichaels, G. Heiland, I. Hall, V. Arcuri, J. Heiland. Hotel: Drake.

INTERNATIONAL EASTERN CO. Booth 208, Exhibit of Model R1MF/3F machine for printing oval and flat detergent bottles and cosmetic containers in three colors in one pass of the press; also lonomatic machine for electronically treating polyethylene bottles and other formed pieces for printing. Personnel: H. Berez, B. Berez, R. Gilbert, C. Kraver. Hotel: Allerton.

JACKMEYER CORP. Booth 1234. Exhibit of new Stik-On blister coated with pressure-sensitive adhesive and applied with hand pressure; development of a package from the creative art and design through printing, forming and custom packaging. Personnel: L. Hershaft, A. Hershaft, M. Rauch, B. L. Kline. Hotel: Conrad Hilton.

JANESVILLE COTTON MILLS. Booth 346. Display of recent developments in package design and engineering for Government and commercial applications, using molded HairKore rubberized-curled-hair cushioning. Personnel: J. F. Beckert, Jr., J. E. Wetzel, H. E. Van Saun, Hotel: Palmer House.

JIFFY MFG. CO. Booth 321. Line of cushioning and insulating pads, sleeves and bags on display; improved padded shipping bag with tear-tape opening device; "Kushion Kraft" cellulose-wadding with water-resistant wadding complying with military specifications. Personnet: C. F. Johnson, M. C. Weisenhorn, T. E. O'Shea, R. C. Garland, J. D. Farrington, R. L. Lindgrove, C. Garner, H. J. Bower, W. J. Burden, J. L. Mace, G. McGuire, J. E. Cleveland, W. J. Romaine. Hotel: Palmer House.

JUDELSHON, OSCAR L., INC. Booth 1132. Exhibit of Model No. 313 Unicut, automatic single-knife plastic-film slitter to slit a roll of film without rewinding in one stroke at high speed; also Model No. 445 razor-blade slitter and rewinder that rewinds all slit rolls as narrow as ¹/₄ in, on a single rewind shaft without interleafing. Personnel: B. H. Green, D. N. Judelson, N. Judelson, Hotel: Conrad Hilton.

KVP SUTHERLAND PAPER CO. Booth 534. Display of printed cartons featuring new laminations, unusual constructions, full-color lithography; printed overwraps, inner wraps and liners; packaging papers for bread, meat and dairy products; new laminated detergent carton; also high-gloss, no-glare printed overwraps. Personnel: W. Nash, J. Stevens, G. Karr, A. Weston, P. Taplin, F. Van Keuren.

KAHLENBERG GLOBE EQUIPMENT CO. Booth 1012. Complete line of machines for filling and sealing ampoules and vials; liquid-filling machines; vial-stoppering machines; 'new liquid-filling machine Model 117-EF for filling light and semi-viscous liquids into glass, plastic or metal containers from 1 cc. to 4 oz., two containers at a time, up to 60 per min; also new automatic vial-stoppering machine for use in conjunction with filling machines, Person-

[Continued on page 346]



MAGNETIC

Fine offset printing provides the magnetism that converts shoppers to buyers.

BERLES offset-printed cartons stand out in every crowded shelf — prime examples of product presentation at its best. A complete service, from board mill to design to production, is your assurance that a BERLES carton has magnetic attraction built in at every step.

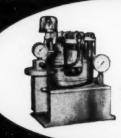
Our facilities provide maximum service for all your needs, including letterpress, gravure, laminating and coating. Consult with BERLES packaging specialists without obligation

FOLDING BOXES - DISPLAY, TRANSPARENT WINDOW, MOISTURE-PROOF,
GREASE-PROOF and PARAFFINED CARTONS - FOOD CARTON SPECIALTIES

BERLES CARTON COMPANY, INC.

Sales and Development Headquarters: 375 Park Ave., New York 22 / Executive Offices, Plants and Paperboard Mills: Paterson, N. J.

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for unwind and rewind operations. Contains exclusive P-H (pneumatic-Hydraulic) Automatic Pilot for pin-point precision within .010 inch.

#110 SERIES STANFORD Vacuum Web Guide

for precise web positioning at any intermediate point. Fast, efficient, economical . . . accurate within plus or minus .010 inch.

> #1 SERIES STANFORD Vacuum Web Guide

for rewind or unwind. Maintains accurate side register within plus or minus .010 inch. Sturdy, simple design, with low initial cost and minimum maintenance.

ANFORD WEB GUIDES FOR ALL WEB PROCESSES

of Users Upon

In any web process, Stanford Web Guiding equipment provides positive control and correction of even the slightest deviation in side register. Three major types, all readily adaptable to new or existing process. equipment. You cut costs and increase profits four ways with Stanford Web Guides:

- · Reduce castly down-time
- Improve product quality
- Eliminate material spoilage Increase running speeds

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Canadian Rep. Gordon Keates, 144 Flora Dr. Scarborough, Ont. Manufacturers of Slatters, Web Guides, Rewinding and Constant Vension Equipment

The eye-appeal of your package



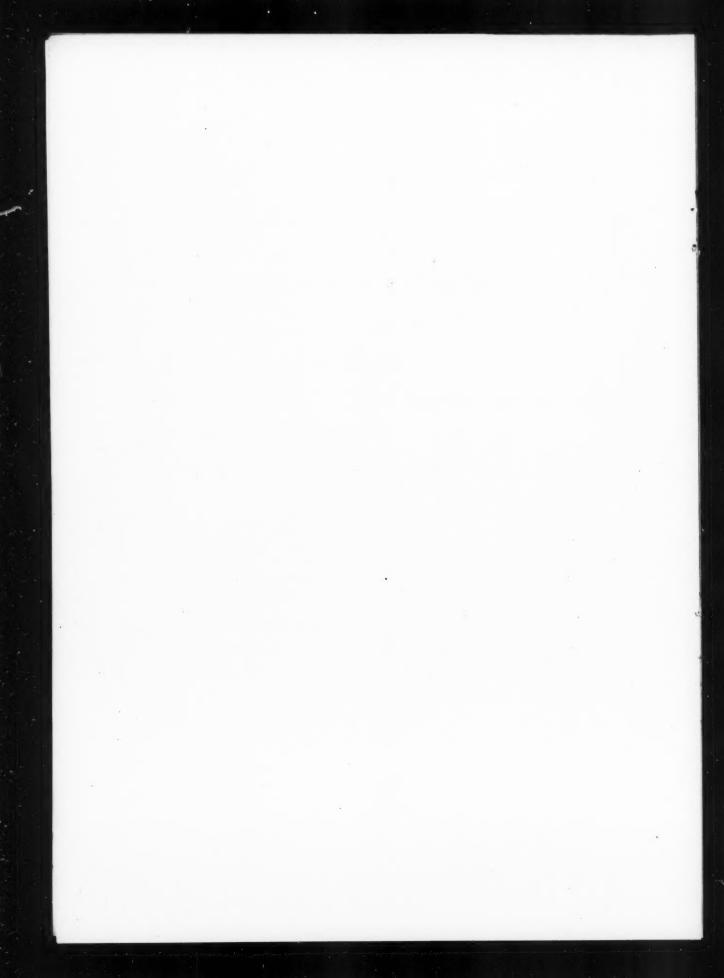
The scuffing, the bitter zero cold, and the manhandling doesn't ruffle the high-gloss beauty of your package when an IC*-62 Polyester Coating is its guardian.

Remarkably versatile, this coating is infinitely more durable than gloss waxes, resistant to ultraviolet, good frost release, gives off no noticeable odor after aging. Its brilliant colors and tints won't burn out, and low cure temperature protects moisture content. It gives weeks of catalyzed stability in closed containers.

And now you can glue IC-62 with IC (Angier) adhesives (no need for dry strips). Now you can have completely sealed cartons with the production and protection advantages of IC-62, at lower cost than press varnish. Write for details about IC-62—another outstanding result of IC Research and Development.



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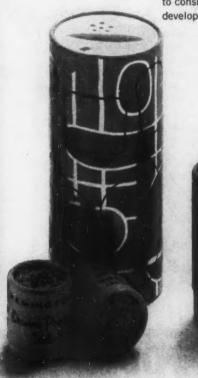


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IN TUBULAR PACKAGING

Exciting things begin to happen when Niemand Bros. tackles a packaging assignment. Each of the five popular products pictured here posed a unique marketing problem. Through the combination of advanced paper, plastic and foil techniques, each package was functionally designed and manufactured, according to its individual requirements, to become a model of efficiency. A Niemand Bros. practical, attractive and economical package can help promote the personality of your product, too. We invite you to consult with our design and development staff without obligation.



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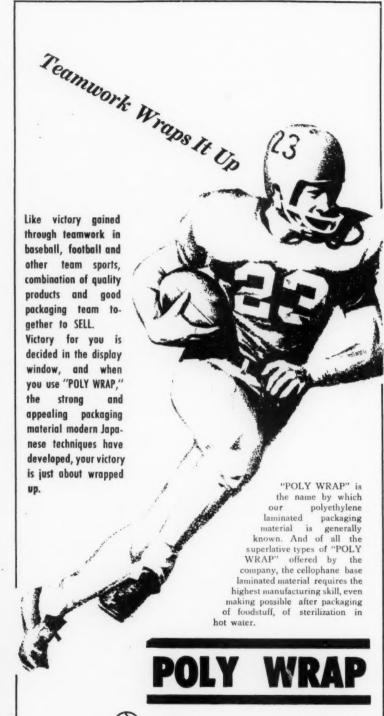
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FUJIMORI KOGYO CO., LTD.

1, Kanda, Higashi Imagawa-cho.

Chiyoda-ku, Tokyo, Japan

HEAD OFFICE: Katsuragi Bldg.,

[Continued from page 340] nel: J. F. Kahlenberg, G. Kahlenberg, L. Rocea, G. McBrady, R. McBrady, I. J. Gurksnis.

KENSOL-OLSENMARK, INC. Booth 1227. Roll-leaf stamping presses and power presses on display. Personnel: M. A. Olsen, S. M. Olsen, F. J. Olsen, N. Glad, J. Verzera. Hotel: Palmer

KEYES FIBRE CO. Booths 1003, 1004. Personnel: D. H. Smith, E. L. Lobdell, Z. R. Johnson, A. J. Breen, F. H. Wesner, *Hotel*: Bismarck.

KIMBERLY-CLARK CORP. Booth 825. Display of new and extensive line of Kimpak interior packaging-cushioning materials with new "K" grades in high-cushion and heavy-duty classifications; radio transmission and receiving devices for bringing messages to visitors, Personnel: J. Staley, P. D'Louhy, S. L. Swenson, E. C. Burch, T. L. La-Pin, A. E. Steeno, B. F. Benson, F. J. Burbee, J. R. Canada, M. G. Durden. R. L. Hoots, K. W. Kaiser, J. E. Kirk, W. L. McCabe, O. D. Oskison, J. A. Plewa, R. C. Thweatt, W. S. Webb. Hotel: Pearson.

KLEEN-STIK PRODUCTS, INC. Booths 1238, 1239. Display of new, improved Label-Aire label applicator which operates on an air-jet principle; complete line of pressure-sensitive-adhesive label stock, including "Tamper-proof" labels; label stock including papers, fluorescent and rubber-saturated stocks, Mylar, vinyls and bright metallic foils. Personnel: G. E. Cole, J. Zalkind, G. Collons, A. Schwartz, L. Mid-dlebrook. *Hotel*: Executive House.

KOPPERS CO., INC., Plastics Div. Booth 907. Exhibit of molded packages of Dylite expandable polystyrene; Super Dylan high-density polyethylene film and its use in packaging on Roto-Wrap machine. Personnel: H. C. Lavely, M. D. Fullerton, G. H. Sollenberger, E. Y. Wolford, M. H. Baker, G. C. Kiessling. W. J. Fitzgerald, L. R. Hunter.

KORDITE CO. Booth 270. Exhibit of new oriented polypropylene film; also "Pose for Profit" promotion, featuring complimentary souvenir folder, Personnel: R. Samuels, W. Dodenhoff, J. Flood, G. Jordan, L. Murphy, J. Lonsdale, T. Arneberg, G. Roche, R. Sea-

KRAUSE, FREDERICK A., ASSOCIATES, INC. Booth 127. Display of Guildcraft re-use gift packaging; metal containers custom built and exclusive with each user; specially designed containers. Personnel: F. A. Krause, R. D. Krause, F. W. Krause, Hotel: Lake Tower Motel.

LABELETTE CO. Booth 1258, Exhibit of Model-14 gallon-can labeler: Model-11B Lab-L-Round labeler; also Model-11A Lab-L-Round labeler. Personnel: J. G. Wesley, A. Meckenberg, S. Groudel, M. Tiemann, W. S. Bryan, T. C.

Our product is manufactured

to conform to U.S. Federal

Spec., JAN, MIL & AN, "JIS" (Japan Industrial

Standard), etc.

(Japan Industrial

Cartons Their Richest in No. 90 ULTRAGLOSS Solid White

FOR cosmetics, the new Ridgelo No. 90 Ultragloss "Solid White" creates cartons of new beauty, distinction, and sales value. Their glazed outer brilliance has no equal. They are bright, white and attractive inside and on the edges. They convey a sense of quality and modernity at a glance.

For boxmakers, this new Lowe product also has advantages. It permits "show piece" printing results. It folds, die cuts, and embosses with ease and perfection. And it has a perfect balance of strength, snap, and rigidity to assure profitable production as well as customer satisfaction.

No. 90 Ultragloss is available in White Bak and Gray Bak grades, but its new Solid White grade actually is the top value of folding boxboards when seeking optimum carton appearance and impulse buying effect. See ... feel ... test for yourself. Write or phone for samples of the new No. 90 Ultragloss "Solid White."



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· ERDCO ·

ONLY \$2387 PER MONTH

Rents New Automatic Blister Sealer

. . . at BOOTH 807

Seals blister every 3 seconds ...table automatically rotates and seals while next package is being loaded. Clear-Pak Jr. "06CP" is fully powered for high speed economical production.

Easier-than-ever to operate ... one inexperienced girl can load and seal in every 3 seconds. Delivered in your plant ready to connect and operate.

Easy size or shape changeover . . . less than 5 minutes. Low cost dies can be made in your own shop.

Compact... only 18" x 30" bench area is needed for "06CP".

Send for details on new leasing plan or outright purchase, today!

ERDCO ENGINEERING CORP.
Dept. MP, Addison, Illinois

Model *07CP* can

automatically seal 10 x 13" blister packages or any number of smaller packages, depending on sizes ... rents for \$37.15 month.

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Model "04CP" with manually operated table rents for \$13.55 / month. ERDCo

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Fenton, W. King, F. Allen, W. Hett, M. Richards, T. Lewis, J. Friday.

LABELS & DECALS, INC. Booth 1110. Display of heat-seal labels; polyethylene bags in 150 stock sizes; tags; pressure-sensitive labels; decals; cellophane and saran bags. Personnel: R. Bode, N. Bode, H. Stackpole, H. Schnero.

LECTROMATIC DEVICES, INC. Booth 816. Exhibit of B24-100 sheeter and bag maker which makes bags or sheets up to 24 in. wide and 100 in. long, sideweld or end seal; B48-100 sheeter and bag maker which makes bags up to 48 in. wide and 100 in. long, side-weld or end seal; variable-speed stackers; B-1100-40-in. sheet folder with web guide and bottom gusset attachment; P-1224 pouch-type bag maker. Personnel: D. R. Zaccone, W. Mead, E. Guelda, W. J. Lebbin.

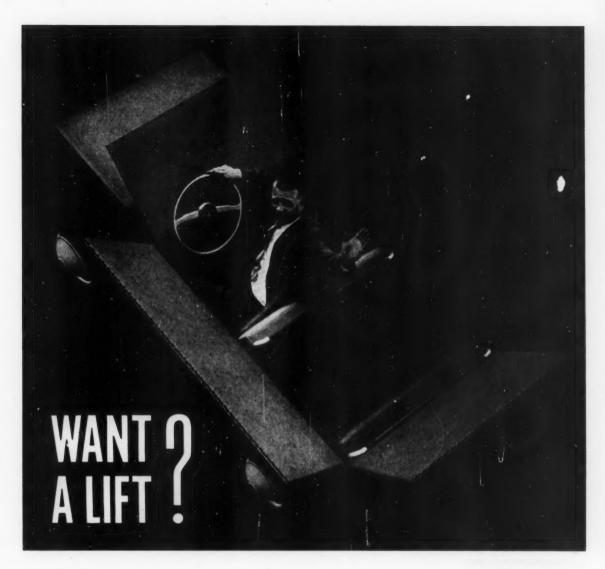
LEEWOOD CORP. Booth 282. Exhibit of new high-density polyurethane foam called Leefoam; custom suspension boxes incorporating Leefoam; Lee-Pak corner pads of Leefoam to suspend rectangular boxes. Personnel: I. L. Schwarz. Hotel: Conrad-Hilton.

LEVER MFG. CO., INC. Booths 1218, 1219. New automatic slitting machine that will take master rolls of film, paper, foil, laminates or pressure-sensitive tapes up to 20 in. in diameter and 85 in. wide and automatically cut the roll into predetermined sizes without rewinding. Personnel: C. Bogart, E. Johnson, D. E. Johnson, J. Wiatric, L. Krautheim. Hotel: Executive House.

LILY-TULIP CUP CORP. Booths 1240, 1241. Working demonstration of Clinch-On equipment which crimps edge of a plastic lid under the rolled edge of a container, resulting in a tamperproof package with increased sanitary standards; Multi-Fill unit for portion filling sealed containers in multiples of 24, and handling both liquid and semi-viscous products; also extensive line of the company's containers. Personnel: N. Hartmann, J. P. Grady, D. Mahony, E. Scully, C. Conklin, K. Mount, J. Falco, W. Thompson, T. Fugitt, A. Anderson. Hotel: Sheraton-Blackstone, Conrad Hilton.

LUDLOW CORP. Booths 921, 923. Exhibit of wide range of paper, film and foil combinations, thermoplastic films and other packaging products; demonstration of film overwrapping with Metaplene on a Package Machinery Co. FA-2 unit. Personnel: A. W. Fisher, Jr., H. H. Reynolds, J. J. Keville, W. S. Maleom, W. F. Crimmin, A. Shirey, Jr., E. J. Gillespie. Hotel: Conrad-Hilton.

MRM CO., INC. Booth 1036. New SL-85 continuous-motion, automatic, straight-line labeler; gravity filler with new attachment for filling thin-walled plastics containers; semi-automatic Model GR gravity filler for filling liquids unsuited for vacuum-fill equipment. Per-



INLAND package engineers can give you one fast. They've helped lift many of America's leading manufacturers to the profit side of the ledger by streamlining their packaging. They are highly trained specialists who know how to determine what you need in a package—and *only* what you need—to assure the safe delivery of your product. And they know how to drive straight past inefficient

packing operations, unnecessary shipping weight and use of space, excessive handling costs, and profit-stealing breakage.

INLAND specializes in the manufacture of corrugated shipping containers . . . is fully qualified to give you the best answers to all of your packaging problems. Let an INLAND package engineer give you a lift. A telephone call will do it!

MILLS:

Macon, Georgia Rome, Georgia

BOX PLANTS:

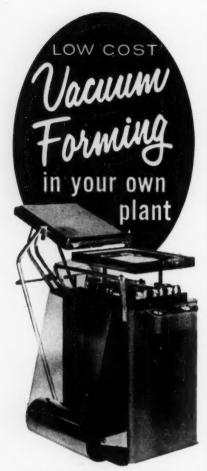
Indianapolis, Indiana Middletown, Ohio Winchester, Virginia Milwaukee, Wisconsin Evansville, Indiana Detroit, Michigan Macon, Georgia Erie, Pennsylvania Ashtabula, Ohio Orlando, Florida Rome, Georgia Biglerville, Pennsylvania Louisville, Kentucky Dallas, Texas Chicago, Illinois Philadelphia, Pennsylvania Baltimore, Maryland Omaha, Nebraska South Haven, Michigan



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Now, for a minimum investment you can control your own production—produce blister packages, displays, 3-D letters, toys and many other vacuum-formed products. The Model 300A, illustrated, utilizes a wide range of thermoplastic materials—vinyls, styrene, polyethylene, butyrate, acetate, in sheets or rolls. No special training is required and changeover from one mold to another takes only minutes. You enjoy the flexibility that comes only with control of your own supply.

LOW-COST MOLD-MAKING FACILITIES AVAILABLE

Although molds may be easily made in your own shop, our extensive moldmaking facilities and expert craftsmen are at your service.

NEED HELP IN DESIGNING VACUUM FORMED PACKAGES

Our blister packaging experts can offer sound technical help with your blister packaging problems.

WRITE FOR COMPLETE INFORMATION

PLAST-O-CRAFT CO., INC. 391 Multierry Street, Newark, New Jersey Mitchell 3-6760 sonnel: R. J. Manas, R. Mishkin. Hotel: Bismarck.

MANHATTAN ADHESIVES CORP. Booth 1055. Samples of adhesives recommended for acetate, cellophane, Mylar, saran, polyethylene and other types of vinyls and plastics; finished products made with company adhesives, including, fast-setting glue-lap resins, blisterpackage adhesives, casein iceproof label glues, strip-stamp adhesives, hot melts for impervious surfaces and various types of contact cements. Personnel: F. Kupfer, H. Lipton, S. Leonard, S. Flaschen, S. Eitelberg, J. Bergman, R. Carver, D. Griffin, E. Fuller, G. Davis, A. Schmidt, K. Schwab, D. Leving, S. Berman, J. McCormack, C. Rider, R. Goodballet. Hotel: Palmer

MARSH STENCIL MACHINE CO. Booth 338. Display of new models of hand-operated and electric stencil-cutting machines; stenciling supplies, including fountain brushes, stencil inks, Rolmark stencil roller, etc.; Dial-Taper and Twin-Taper electric tape machines; also new 1-C coder attachment for tape machines to print code markings on gummed tapes. Personnel: W. Marsh, E. G. Krause, E. Lorenz, T. R. McLemore, Hotel: Avenue Motel.

MARTIN ENGINEERING CO. Booth 1202. Hand-held demonstration of Vibrolator vibration inducers for moving granular material out, down and through hoppers, chutes and screens. Personnel: E. F. Peterson, E. H. Peterson, M. Peterson, J. Schultz, J. Haney, B. Dougherty. Hotel: Union League Club.

MEAD CORP. Booths 604, 605, 704, 705. Operation of Cluster-Wrap and Meadomatic packaging machines; samples and examples of modern packaging techniques; new poultry container; other new developments in packaging. Hotel: Palmer House.

MERCURY HEAT SEALING EQUIP-MENT CO. Booth 213. Exhibit of Strip-O-Matic feeding screws; strip-packaging machines; two-tube Verti-Pak; automatic bag forming, filling and sealing machine; scale system demonstration; VLS-12-D with imprinter; foot-operated polyethylene sealer MPE-12; laveblow-up picture of Goodyear Tire Rubber machine, Personnel: J. Dreben, M. Black, I. Black, L. Black, W. Green, W. M. Scanlon, L. Strick,

METAL EDGE INDUSTRIES. Booth 727. Exhibit of company method of producing boxes featuring strength, durability and beauty at point of packaging including its components, the Flash-folder for breaking and imprinting flats, the Fastayer and the Fastay; theme is "Packa-Graphics," new concept featuring modern design and style with strength and durability. Personnel: A. E. Wolf, C. H. Hiltz, E. C. Kain, F. Salzman, H. J. Baldwin, L. F. Phillippi, L. Berry, W. E. Welter. Hotel: Pick-Congress.

MILLER & VAN WINKLE. Booth 174. Completely new process for automatic molding of expandable polystyrene on display. Hotel: Sherman.

MILPRINT, INC. Booth 819, Visual display of development of a package; 'Kettle-Redi" boil-in pouch that can be reverse printed without delamination: new metalized glassine paper featuring foil-like brilliance at less cost; Video-metric comparator for visitors to compare and judge effectiveness of different package designs; company's NFPA award-winning packages. Personnel: W. Heller, Sr., A. Snapper, F. M. Stefan, W. J. Hullinger, P. B. Hultkrans, C. K. Billeb, G. L. Everitt, B. H. Baesler, E. T. Wood, R. J. Becker, F. Hanis, A. Miller, D. A. Perino, J. R. Chapman, G. L. Foote, H. Jones, G. R. Sontag, W. H. Casper, D. E. Cazel, J. M. Eyman, J. B. Perkins, C. Dold, D. P. Garry. Hotel: Palmer House

MINNESOTA MINING & MFG. CO., Industrial Tape Div., Chemical Div., Printing Products Div., Derby Sealers Div. Booths 712, 814. Scotch brand industrial tapes; heat-sealable film; fluorochemical paper size; printing products for packaging; new Scotchpak multi-unit heater for volume heating of boil-in-bag foods; new taping machine with brush for eliminating static tapeapplying problems; method called "3M" brand color key for checking color break and register before a lithographic plate is made; Kel-F plastic film; paper chemical FC-805 for packaging: multiwall bags, asphalt laminates and in-wax holdouts; demonstration of paper-size application to bleached and unbleached kraft paper including testing of on-the-spot-treated samples; demonstration of color key that shows both printer and packaging customer how final product will appear; giant roll of filament tape; contest involving a 2,000-lb. roll of reinforcing tape. Hotel: Drake.

MITCHELL SPECIALTY DIV., Nova Industrial Corp. Booth 1228. Exhibit of metering and mixing system dispensing rigid urethane foam for foam-in-place packaging, demonstrating new automatic solvent purge attachment; distribution of foam packaging samples. Personnel: A. J. Breslau, M. Schneider, K. Hawkins. Hotel: Lake Shore Drive.

MODERN PACKAGING. Booth 532.
Modern Packaging Encyclopedia and other Breskin publications on display; editors and staff of magazine on hand for assistance and discussion. Personnel: C. A. Breskin, A. S. Cole, J. M. Connors, T. B. Breskin, S. Siegel, R. C. Beggs, P. Muller, M. Stoller, J. C. Galloway, G. O. Manypenny, T. O. Me-Donough, J. Wemple, R. Rogers, L. Stouffer, P. Hagens, T. M. Jones, R. J. Kelsey, W. C. Simms, C. A. Southwick, Jr., S. L. Gerrish, R. MacBride, J. Schwartz, R. Birnbaum. Hotel: Sheraton.



for every use_cubitainer is the low cost composite container, molded plastic cube with corrugated or wirebound wood overwrap, for shipment of liquids. Its minimum unit cost, tare weight and storage space add up to cost savings. CUBITAINER comes in the right size for your product: 1-quart, 1-gallon, 2½-gallon, 5-gallon or 15-gallon with outer pack to suit the application. CUBITAINER has the right closure for your product: FlexSpout*, screw cap, tamperproof heat seal spout, or plug... for regulated or non-regulated liquids. Hedwin's technical staff is available to help you choose the right CUBITAINER for your product, assist in all phases of its use or develop a CUBITAINER for a special requirement.

*FlexSpout-Registered trademark of Rieke Metal Products Corporation.

16 Registered trademark of Hedwin Corporation.

See Cubitainer in Booth 709, National Packaging Exposition, Exposition Center, Chicago, April 10-13...or write for full information.



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SOLVE YOUR FILLING PROBLEMS WITH LOW COST lawatic FILLERS

fills liquids . . . free flowing ... or viscous . . . pastes . . . powders!



PORTARLE LIQUID FILLERS

PORTABLE LIQUID FILLERS
Provide a low cost means
for dispensing a wide variety of liquid or semiliquid products into vials,
bottles, cans or ampoules.
Interchangeable pump assemblies cover range from
.025 cc to 2080 cc (64
ocs.) per stroke. Electronically controlled, variable
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WORM TYPE PASTE FILLER

Handles viscous creams, paint pigments, pastes, grease and adhesives. Four models cover range from 2 cc to 1040 cc (32 czs.) per stroke. Worm feed mechanism assures accurate fill with viscous products. Cut-off device prevents 'stringing'. Filling rate fixed at 20 strokes per minute.



NET WEIGHING MACHINE

Automatically net weighs and dispenses into con-tainers any free flow-ing, non-liquid product. No stirrers, augers or agitators of any kind. No crushing or damage to the product. Three models cover the range from 2 grams to 1000 grams (40 ozs.).





Fills 1, 2 or 4 containers at a time at speeds up to 120 per minute. Simple product changeover. Fills free-flowing or semi-viscous liquids with 1% accuracy. Handles plastic, glass or metal containers from 1 dram to 16 ounces. Patented bottle centering device assures clean fills—eliminates spillage.

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38 West 21st St. New York 10, N. Y.

[Continued from page 350] MODERN PLASTIC MACHINERY CORP. Booth 214. Display of E-21

blow-molding machine complete with accumulator. Personnel: F. J. Maywald, L. J. Kovach, C. S. Gilbert, K. R. Scherer, E. J. Tanis. *Hotel*: Palmer

MONARCH MARKING SYSTEM CO. Booth 234. Display of Tickopres label, tag or ticket imprinter for overprinting plain or pre-printed items with variable data for production control, identification, etc.; Sensomatic automatic label imprinter and applicator for overprinting plain or pre-printed pressure-sensi-tive labels. Personnel: R. T. Wyatt, F. O. Hudson, K. Tannehill, D. Dun-woodie, C. R. Pippenger, J. C. Belle. Hotel: Avenue Motel.

MONROE-DANFORD & CO. Booth 224. Display of closures; containers; metal and plastic stock and custom specialties; also unit-packaging contracting service. Personnel: M. D. Smart, R. H. Hoonhout, D. M. Shaw. Hotel: Congress.

MONSANTO CHEMICAL CO., Plastics Div. Booths 607, 608. Display of examples of packages and containers made of Lustrex polystyrene, polyethylene and Vuepak cellulose acetate.

MORNINGSTAR-PAISLEY, INC. Booth 348. Display of new high-speed adhesives for all operations, including new fast-setting, odor-free packaging adhesives meeting Food & Drug regulations which require good tack and excellent bonding strength, flexibility and coverage. Personnel: M. Stempel, E. C. Lenz. S. Schuller, D. Bookshester, P. M. Liner, I. G. Nichol, M. Stempel, Jr., C. Roth, H. Missner, E. Blumberg, K. Daniels, J. Karas. Hotel: Pick-Congress.

MOSSTYPE CORP. Booths 341, 342. Display of newest "Mounter-Proofer" for pre-proofing and setting up rubberplate printing jobs off the press; 'D-Mount" rubber-plate cylinder, an integral cylinder with removable shaft; new Platekote spray coating for printing plates and dies that affords cleaner reproduction; technical representatives describing latest developments in printrollers. Personnel: F. Moss, A. R. Bradie, J. Lecraw, C. J. Fillare, J. Gerard, D. Graper, A. Milidantri, J. Rogers, H. Salmaggi, B. Saul, D. Shoup. Hotel: Palmer House.

MULTISTAMP CO. Booth 351. Marking methods and use of stencil dupli-cators to be featured. Personnel: J. H. Mason, Hotel: Morrison.

MYSTIK ADHESIVE PRODUCTS, INC. Booth 809, Exhibit of pressuresensitive packaging tapes, including strapping tape, rope stocks and cloth tapes; high-temperature tapes for aircraft and missile application, electrical tapes, protective materials and specialty tapes; new folder "Tapes for the Space [Continued on page 358]



Forecast for food products packaged by KVP Sutherland-impulse sales... followed by small boys who can't wait.

You get this kind of action for cookies, crackers and pretzels because creative packaging sells. And a good part of the action comes from KVP

Sutherland's specialty-colorful, flavor-appealing pictorials.

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Manufacturers' Literature

Described below . . . the latest literature, catalogs and brockers for packaging industry. Dollar saving and dollar making ideas and da available without charge.

EQUIPMENT . SUPPLIES . SERVICES

TRACKING ROLLS. 4-page illustrated bulletin describes and illustrates construction of rolls with stub shafts and through shafts—rolls with fabricated bodies and cast bodies, alloy rolls, statiles study rolls, rubber-covered rolls, etc. Barolay Machine, Inc. (150-D)

MACHINE MOUNTS. Illustrated bulle-tin describes seachine mounts for high precision tools and allied equipment. Ad-vantages include accuracy, high isolation efficiency, absolute level, optimum damp-ing, wide load rangs, etc. Barry Controls, Inc. (151-D)

PACKACING, CARTONING MACHIN-ERY. 40-page illustrated brochure offers collection of articles reprinted from lead-ing trade publications explaining applica-tions of packaging machinery manufac-tured by leading company. Bartelt En-gineering Co., Inc. (153-D)

BAGS. Handy reference booklet describes complete line of bags—including multi-wall, small paper, open-mesh, cotton, thread and twine, etc. Bemis Bro. Bag Co. (153-D)

FOLDING BOARD. Folder with sample sheets describes line of coated folding board that features coated surface cast directly on strong sulphate board. Box samples included also, The Champion Paper & Fibre Co. (154-D)

BELTS. Folder with assorted bulletins discusses line of belts-including incline conveyor belts, tunnel belts, white cotton belts, etc. Aiso covers special products and supplies. Burrell Belting Co. (155-D)

CANNING CARBONATED BEVER.
AGES. Catalog discusses carbonated heverage canning lines—includes information
on syraping system, pro-mix system, filting and closing equipment, processing
equipment, etc. Schematic invents included. Continental Can Co. (156-D)

ALUMINUM FOIL. 20-page booklet de-ceribes foil-making facilities of leading French producer. Includes data on avail-able gauge, tempers, and laminations. Lechner Pulp & Paper Co., Inc. (157-D)

DOUBLE PITCH CHAINS. 88-page fi-lastrated book describes line of double pitch chains and aprockats for conveying and power transmission. Complete de-scriptions, dimensions and list prices, ap-plications, other data. Diamond Chain

PACKAGING MACHINERY, 4-page fi-lastrated folder describes complete line of packaging machinery including auger filling, casing, pouch filling and sealing, check weighing, carton filling, etc. De-scriptions, specifications, other data. Food Machinery & Chemical Corp., Packaging Machinery Div. (189-D)

ADHESIVES. 8-page spiral-bound book offers information for those interested in buying, specifying or using adhesives in breweries. Covers factors influencing choice of adhesive, special adhesives, proper handling of adhesives. H. B. Fuller Co. (160-D)

RLECTRIC MOTOR CONTROLS. 56-page illustrated booklet describes line of electric motor controls—including manual and magnetic starters, magnetic contac-tors, drum switches, pump controls, etc. Furnas Electric Co. (161-D)

UTILITY BOXES. 4-page illustrated folder describes complete line of plastic utility boxes—diagrams, dimensions, other data. Gilbert Plastics, Inc. (169-D)

LABEL CODER. Illustrated bulletin describes coded label designed to give you the facts you want to know about your product—only you can read them. Advantages, applications, etc. Griffin-Rutgers, Inc. (163-D)

PRINTED PLASTICS. Illustrated book-let with samples describes line of printed flexible plastics—usable for advertising, merchandising, sales promotion. Com-plete description, applications, other ad-vantages. Goodren Products Corp. (164-D)

MARKING, CODING ATTACHMENT. Illustrated catalog sheet describes friction-powered marking and coding attachment that imprints an accurately-located legend on any container from 3 in. to 24 in. long. General description, advantages, technical specifications. Gottscho. (165-D)

PIBRE DRUMS. 4-page illustrated folder describes new fibre drums with

molded fibre cover, fibre bottom—that provide approved shipping capacity up to 550 lbs. with minimum ture weight, all-fibre interior. The Greif Bros. Cooperage Corp. (168-D)

FOIL WELDER. Illustrated bulletin de-scribes rotary tip, ultrasonic foil welder. Ceneral description, table of typical welding speeds, diagrams, other data. Gulton Industries, Inc., Vibro-Cenerics

AUTOMATIC PACKAGING, Illustrated bulletin describes automatic packaging machines for items such as flour, sugar, salt, rice, coffee, tea, detergents, etc. General information, other data. Fr. Hesser. (168-D)

PACKAGING MACHINERY. Assorted data sheets cover packaging machinery, including high speed cartoning machine, automatic tube-filling and closing machine, automatic cartoning machine, high speed tube filling and closing machine. Complete information, descriptions, etc. Industrie-Werke Karlsruhe. (160-D)

INKS. Informative article called "How to Choose the Right Ink" gives valuable in-formation on paper surfaces, process printing, etc. Included also: color sample cards for letter press and other packaged inks. Interchemical Corp., Printing Ink Div. (170-D)

METAL DETECTING. Informative, fl-lustrated booklet describes industrial equipment capable of detecting the pres-ence of any metal—brass, tin, cop-per, steel, iron, lead—in any non-metallic product. Discusses applications, sensitivity, alarm system. Gives specifica-tions and other data. Instrument Corp. of America.

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EQUIPMENT

· SUPPLIES

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FLEXOGRAPHIC PRESSES. 8-page fllustrated booklet describes three color flexographic stack press, narrow web flexographic press, two and four color flexographic presses, high speed beg machine, rewinder and slitter. Manhasset Machine Co., Inc. (173-D)

PAPER SAMPLES. Folder with assorted samples covers line of papers for laminating, insulating, packaging, protecting, fabricating and processing, Mosinee Paper Mills Co. (173-D)

TAGS. Spiral-bound estalog discusses complete line of tags and dis-cut special-ties. Includes button tags, coupon tags, inventory tags, machine items, pressure-sensitive labels, tag strings, etc. The National Tag Co. (174-D)

DISPLAY PACKAGING. 8-page illustrated booklet and data sheets describe line of custom-designed or standard packages and promotional specialties—plain, embossed, or printed. Covers comboured dome packaging, custom-contoured and standard slide cover boxes and many others, Plastic Artisans, Inc. (175-D)

LETTERPRESS. 4-page illustrated folder discusses rotary rubber plate letterpress that offers adjustable fountain rolls, optional top fountain adjustable, ductor roll and form roll control rods. Advantages, applications, other data. Paper Converting Machine Co. (176-D)

TAPE APPLICATORS. 8-page illustrated book described dispensers and seal-er-dispensers for tape. Also covers making machines. Complete descriptions, specifications. Permacel. (177-D)

LIQUID FILLERS. Illustrated 24-page bookiet discusses line of electronicallycontrolled portable liquid fillers that dispense all liquids-free-flowing, viscous and feaming. Complete description. National Instrument Co., Inc. (178-D)

PACKACING. Assorted filustrated bulletins describe complets line of packaging machinery including polystyrene mechine that seals with 180 degree foldover lock. Also, air-tight heat sealing, jog index tray, split roll machine that produces up to four printed bags at one time from one machine, etc. Descriptions, advantages. Schjeldahl Co. (179-D)

PACEAGING EQUIPMENT. 8-page fitrated folder describes a fully automatic case former, accumulator, packer and sealer—in one unit. Specifications. Schroeder Machine Corp. (180-D)

TURES. 16-page illustrated book covers complete line of tubes—including information on tube decoration, protective liners, standard tube sizes and especities, measuring tubes and tube openings, etc. Sheffield Tube Co. (181-D)

STATIC ELECTRICITY. Assorted filustrated articles and bulletins describe static electricity and what can be done to prevent it. General description, other data. The Simoo Co. (189-D)

CELLULOSE WADDING. 'Illustrated folder with samples describes cotton wadding for surface protection and for custioning. General description, detailed data, advantages, other information. The Steams & Foster Co. (188-D)

GLASS BOTTLE PROTECTION. 4-page illustrated folder describes process that offers longer life, temproved appearance for glass bottles. Reduces bottle breakage up to 50%, increases line speed, prevents "bottle fatigue". Complete

description, advantages, other data. Thatcher Glass Mfg. Co., Inc. (184-D)

BOTTLE CLEANER. 4-page illustrated folder describes rotary rinser and cleaner that handles any size or shape of bottle or jar-from ministures to gallons. U. S. Bottlers Machinery Co. (185-D)

PACEAGING FILM. 18-page illustrated book describes packaging film—a pure parafinic hydrocarbon that is tasteless and odories. Soft, wany taxture; clear to translucent appearance. Covers physical properties, chemical resistance, etc. Plastics Div., Visking Co., Div. of Union Carbide Corp. (188-D)

WEB PROCESSING. 128-page illustrated book covers machinery designed for treating webs of paper. Discusses web processing, imprognators, coaters, printers, iaminators. Also discusses dryers and fusers, enabossers, cooling roll, auxiliary equipment, etc. John Waldron Corp., Sub. of Midland-Ross Corp. (187-D)

TUBES. 32-page spiral-bound handbook covers complete line of tubes—including tube design factors, tube decoration, tube packaging. Also covers applicator tips, tube closures, caps and cap liners, etc. Complete information, diagrams, other deta. A. H. Witz, Inc. (188-D)

PACEAGING EQUIPMENT. Folder and illustrated catalog sheets describe complete line of packaging equipment—including hi-feeders, low-teeders, dual scale net weighers, semi-autometic fillers, fully submatic bag former/iller/saler, etc. Other data. The Woodman Co., Inc. (189-D)

SIX-PACE BEVERAGE CARTON. 4page folder describes features of new carton to provide greater visibility of beer cans for packaging in six-pack cartons. Packaging Corp. of America. (190-D)

EXTRUDED VINYL FOR PACKAG-ING. 16-page estalog describes features of extruded vinyl film suitable for transparent packaging of such itsms as tentiles, paper products, novelties, toys, food products, etc. Specifications. Goodyear Tire & Rubber Co. (191-D)

PLASTIC PACKAGING SUPPLIES. 40page directory gives geographical listing of plastic packaging molders and extruders in the U. S., listed in alphabetical order. Plastics Div., Koppers Co., Inc. (193-D)

PACKAGE CUSHIONING. 5-page filustrated bookdet describes fiexible, resilient form of expanded polystyrene for package cushioning. Protects articles from shock and vibration during transportation and handling. Armstrong Cork Co. (188-D)

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Age" available; new aluminum-foil tape No. 7452 with economical 2-mil foil backing and rubber resin adhesive; new thermosetting glass-cloth tape No. 7020. Personnel: Robert J. Leander, Russell J. Leander, R. D. Smith, S. L. Ostrenga, N. F. Hansen, F. Stewart, R. H. Dietz, M. J. Loftus, L. V. Corwin, J. Kaminski, J. N. Elliott, W. T. Costello, J. J. Kern, G. Nonko, Jr., H. Oehler, G. Kummer. Hotel: Palmer House.

NASHUA CORP. Booth 1024. Exhibit of National tape-dispensing machines; Itstix gummed tape; Presto shirt bands; Presto utility bands; &so Peelac sealing tape. Personnel: H. W. Bailey, J. F. McDermott, C. T. Blum, R. E. Senechalle, G. Jaquith. Hotel: Executive House.

NATIONAL BARREL & DRUM ASSN., INC. Booth 1130. Translucent photographic display showing each step of modern technology in the process of steel-drum reconditioning. Personnel: M. Hershson, B. Burkhardt. Hotel: Pick-Congress.

NATIONAL EQUIPMENT CORP. Booths 1032, 1033, 1034. Exhibit of Short-A-Matic case sealer; Rose 5-1ST high-speed twist-wrapping machine; Rose FWT form-cut and twist-wrapping machine; Chaffee bag sealer. Personnel: W. H. Kopp, S. Greenberg, C. Balin, B. Green, C. Greenberg, A. Carter, J. Debrovner, S. Goldstein. Hotel: Drake.

NATIONAL FOIL CO. Booth 906. Demonstrations of new Hi-Lite lamination, showing effects of light and motion to be achieved through fine-line embossing on this new foil product. Personnel: R. E. Hunt, R. C. Hardie, D. W. Cowell. Hotel: Bismarck.

NATIONAL PAPER BOX MFRS. ASSN. Booths 138, 139. Exhibit of 99 prize-winning set-up boxes for 1960, including vendor packages and retail boxes; demonstration showing elegance and versatility of set-up boxes, impact of gift packaging and use of character boxes to build store images and customer preference. Personnel: N. T. Baldwin, R. R. Hersham, T. C. Greene. Hotel: Drake.

NATIONAL STARCH & CHEMICAL CORP. Booth 724. Exhibit of Instant-Lok hot-melt-adhesive extruder system; Easi-Clean multi-purpose resin adhesive; foil-laminating and flexible-packaging adhesives; Resyn 3600, a new water-dispersion polyvinylidene chloride resin which can be applied to porous and non-porous substrates by standard coating equipment. Personnel: F. Greenwall, D. Pascal, J. Dillon, S. F. Thune, L. Klempner, F. L. Murphy, R. A. DeWolfe, J. C. Clay, B. C. Gordon, W. Sederlund, R. C. McGaffin, C. Witzmann, R. Weidener, S. Gold, A. Norman, G. Stahl, G. Browder, W. J.

East, C. Fazioli, P. Gronendyke, J. Welchlin, C. Bajadek, L. Muhlberg, R. Pett, G. Kaufmann, H. Fisher, R. Spye, G. Murphy, D. Crowe, J. Galick, O. Kulin, J. McClaran, B. V. Schaub, N. Riley, G. Burgoyne. *Hotel*: Sheraton.

NEW ERA MFG. CO. Booth 229. Exhibit and samples of various products produced in one complete operation on company machines; photographs and close-up details of equipment; bulletins available covering various machines manufactured by the company and its divisions, Gracher Stringing & Wiring Machine Co. and Wetter Numbering Machine Co. Personnel: J. E. Morris, K. J. Conrad, H. W. Plavier. Hotel: Palmer House.

NORCROSS CORP. Booth 283. Exhibit of automatic viscosity controllers and recording-controlling Viscometers for single and multiple tank systems; complete pumping and viscosity control systems; information on application of automatic viscosity control to flexographic and rotogravure printing, coating processes and adhesive applications. Personnel: A. S. Norcross, R. A. Norcross, R. S. Davis, Jr. Hotel: Avenue Motel.

OGDEN MFG. CO. Booth 120. Exhibit of electric heating elements; Fenwal controls; other company products. Personnel: R. M. Grendys, J. W. Hannan, J. Busch, G. O'Connell.

OLIN MATHIESON CHEMICAL CORP., Packaging Div. Booth 442. Display of new OF-18, a rugged, polyethylene-coated cellophane for wrapping large, irregularly shaped or bony cuts of fresh meat; new "V" cellophanes for foods with high shortening content, such as cookies, cakes, candies, nuts; OF-20 cellophane coated with combination of antioxidants to retard oxidative rancidity; Universal tissue, for inner wrapping of luxury products; Waylite lightweight paper for package inserts; Humi-Gard corrugated container with built-in moisture resistance for produce and other products; Armor-Gard corrugated container, that provides strength in areas of extra stress; Scuff-Master corrugated container with special inside coating that guards against scuffing product finish; Skid-Master multiwall shipping sacks and Waterbuff grocery sacks for frozen foods, produce or other moist items. Personnel: R. H. Evans, A. J. Gardner, E. L. Lynn, G. R. Johnson, L. E. Simerl, R. F. Bennett. Hotel: Executive House.

OWENS-ILLINOIS, Closure & Plastics Div. Booth 619. Exhibit of blown and pressed plastic containers; stock and custom-molded items such as stick containers, powder boxes and pill boxes; metal and plastic closures; sifter and pour-out fitments; plastic snap and slip caps. Hotel: Sheraton-Blackstone.

OWENS-ILLINOIS, Glass Container Div. Booth 525. New developments in

The New Airtight Ribbed Aluminium Foil Container





The Alu-Cup foil container with internal vinyl protection and hermetic fingertip lid (U. S. patent No. 2738,632) is swiftly becoming the universal retail pack for Cheese Spread. Last year's sale over 50,000,000 cups. Keeps contents fresh for many months in any climate.

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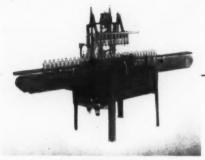
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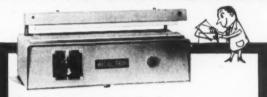
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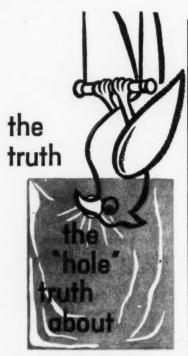
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disposable containers for beer and carbonated beverages; full range of container sizes from small family servings to king sizes for food items; plasticcoated glass pressure bottles; spraycoated glass containers; stock containers with easy-grip and easy-pour features. Hotel: Sheraton-Blackstone.

OWENS-ILLINOIS, Kimble Glass Co. Div. Booth 527. Display of Opticlear vials; private-mold toiletry and cosmetic bottles; complete line of parenteral-drug containers including Color-Break ampoules, syringe cartridges, Neutraglas bottles; aluminum seal and Optiseal serum and stopper vials; large borosilicate and opal glass containers. Hotel: Sheraton-Blackstone.

OWENS-ILLINOIS, Paper Products Div. Booth 620. Translite pictures of company's new Forest Products Laboratory featured, showing testing equipment as well as conditioning rooms which test boxes under varying degrees of heat, refrigeration and humidity; samples of outstanding, new corrugated box designs. Hotel: Sheraton-Blackstone.

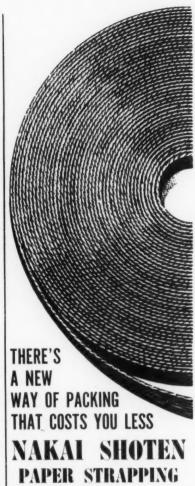
OXY-DRY SPRAYER CORP. Booth 123. Display of electronic ink-offset preventer; also anti-offset powders. Personnell: G. W. Wilson, R. W. Wilson, F. R. Adams, G. C. Bruscato, W. M. Johnson, C. F. Richardson, W. G. Buhler, R. Sanders, W. Doucher. Hotel: Lake Tower Motel.

PACIFIC PACKAGING CO., Pacific Packtron Systems, Inc. Booth 280. Exhibit of new high-speed five-way Illumitronic classifier, with speeds up to 250 per minute; also standard Illumitronic check weigher, Personnel: R. L. Underwood, J. Shuster, R. A. Hull. Hotel: Conrad Hilton.

PACIFIC PLASTIC MACHINERY, INC. Booth 1221. Display of sample vacuum-formed parts, skin and blister packages; Model V combination vacuum-forming, skin-blister packaging machine with automatic roll-feed and slit attachment; "Lab Model" vacuum-forming machine, 14-by-20-in. mold size, with automatic drape mechanism and timed forming cycle used for sampling products, packages and materials. Personnel: J. K. Findorff, W. E. Moll, W. Congleton, E. Tascher.

PACKAGING COMPONENTS, INC., Foampak Corp. Booth 201. Exhibit of foam inserts and parts made of flake-free Styrofoam electronically die-cut to exacting specifications; molded expand-able polystyrene, from the smallest to the largest units; colorful Satin-Pak trays and platforms made from Dynafoam. Personnel: J. Kramer, W. L. Herne, T. H. Barnett. Hotel: Executive House.

PACKAGING INDUSTRIES, LTD., INC. Booths 238, 240. Exhibit of blister machine with built-in conveyor, seals obtainable in ¾ to 1¼ sec.; special laboratory heat sealers; also new type



Whenever an important new product is developed, it is because the conventional products preceding it left something to be desired. In the matter of strapping, steel belt has been an expensive and heavy packing material, and one which has caused expensive injuries with its sharp edges. Such materials as hemp, sisal, straw rope, etc., have been too bulky and not always dependable.

Today, there's a new way of packing, which saves you money in transportation (its light), in injuries (its harmless), in time (its easier to work with), and in composition it doesn't spoil, itself, and therefore doesn't spoil packages. Nakai Shoten Paper Strapping, developed in Japan, means good business to packers and shippers, with its superior strength, economy, safety and speed. Get onto the new way of packing! Get PAPER STRAPPING, from Nakai Shoten!



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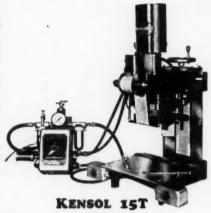
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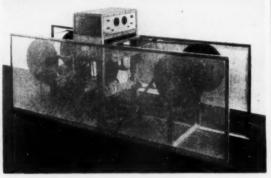
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- Fully automatic—just load in the blister and contents
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■ Also, Automatic Blister Turntable

- Fully automatic or manual
- Turntable sizes 50", 60" or 72"
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Call or write for full information. Some sales territories still available.

THERMO HEAT-SEALING MACHINE CO., INC.

692 Broadway / 4th St. . Telephone: AL 4-9570 . New York 12, N.Y. | [Continued on page 364]

of blister heat sealers. *Personnel*: H. A. Rohdin, J. Bambara, C. C. Jacobson. *Hotel*: Executive House.

PACK-RITE MACHINES, Div. Techtmann Industries, Inc. Booths 317, 318, 319. Exhibit of new high-speed polyethylene bag-top cut-off sealer; also complete line of heat-sealing equipment and automatic weighing and filling equipment. Personnel: E. Holm, Mrs. E. Holm, W. Techtmann, Mrs. W. Techtmann, A. E. Pohl, G. Higuchi, H. L. Vogt. Hotel: Harrison.

PAN INDUSTRIAL CORP. Booth 1122. Semi-automatic and fully automatic equipment manufactured by Werner Kammann Machine Works of Buende, Westphalia, for screen printing of containers of all types on display. Personnel: W. H. Binder, W. Kammann, H. Schlittner, C. Stein. Hotel: Sherman.

PAPER PACKAGE CO. Booths 932, 933. (See Diamond Plastics Industries, Inc.)

PEACOCK BUSINESS PRESS, INC.
Booth 306. Exhibit of company publications, including Paper, Film and Foil
Converter, American Boxmaker and
American Paper Merchant. Personnel:
J. S. Peacock, W. C. Holdsworth, V.
Prescott, J. Metcalfe, J. Lewin, L. Q.
Yowell, R. C. Johns, E. Newton, W.
Hughes, C. J. Macarthy, C. L. Coy.
Hotel: Conrad Hilton.

PERMACEL. Booth 611. Recorded telephone messages synchronized to rotating back panels describing pressure-sensitive tapes, adhesives and dispensers used in all types of packaging applications; new Decalar 956; new Strap-lt 4W dispensers, which apply, wipe down and cut tapes up to 2 in. wide in one operation. Personnel: G. A. Fitzgerald, R. S. Bradford, J. S. DeNoia, W. H. Squire.

PFAUDLER PERMUTIT INC. Booth 352. Exhibit of 10-station, rotary piston filler with through conveyor, designed for glass, paper or pre-pack containers at filling speeds up to 300 cans per minute and high accuracy. Personnel: R. C. Silver, W. D. Pheteplace, H. Dawson.

PHOTOMATION, INC. Booth 104. Exhibit of photo-electric instruments and controls as applied to packaging field; photo-electric monitoring device to show how it is possible to scan bottles to make certain that bottle caps, labels, etc., are in place; photo-electric sorting device. Personnel: E. Ross, R. W. Heimsoth.

PHOTOSTAT CORP. Booth 290. First exhibit of Documar reader-printer; portable microfilm camera for protection of checks and recording business documents; Autofocus reader. Personnel: A. Lock, I. Scott, T. Minde, A. Fidlund. Hotel: Palmer House. [Continued on page 364]

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BOLER Petroleum Co.

Boler Building, Ardmore, Pa.



[Continued from page 362] PLASTICS WORLD: Booth 1109. Personnel: S. W. Jones, Jr. C. W. Cle-

PLASTICS WORLD: Booth 1109, Personnel: S. W. Jones, Jr., C. W. Cleworth, F. C. Mahnke, Jr., R. K. Tindall. Hotel: Ambassador East.

PLAS-TIES CO. Booth 1232. Plastic and paper-covered wire ties for bag closures and bundling small items. Personnel: J. Bower, D. Crossley. Hotel: Palmer House.

PLAST-O-CRAFT CORP. Booth 111. Display of a new trimming machine for blisters and skin-packed products; advanced version of #400A vacuum-forming machine; introduction of a 40-by-72-in. pressure- and vacuum-forming machine, fully automatic, with plug assist and double heaters. Personnel: M. M. Arnould, E. Joyce, B. Budzyn.

PLASTOFILM, INC. Booth 325. Display of vacuum, pressure and compression thermoforming; blister packaging; bubble packaging; heat-sealed blisters; slide packs; dial packs; transparent acetate boxes, lids, tubes and sleeves; thermoformed box inserts and dividers, both transparent and opaque; food containers; snap-on lids for plastic, board or aluminum containers; plastic-sheet fabricating; vending-machine food dispensers; catering food servers. Personnel: G. Wiss, M. Benaroyo, L. Seeley, C. M. Phipps, S. I. Kalmich.

PLASTOMATIC CORP. Booth 233. Hermetically sealed polyethylene containers and sealing equipment on display. Personnel: T. E. Betner, H. R. Hutchinson, A. B. Canfield. Hotel: Sherman.

PNEUMA-FLO SYSTEMS, INC. Booth '176. Various models of Powder Spray units; Brookfield Viscosel automatic viscosity controls; new Dynamix circulating, agitating pumps for inks and adhesives, etc.; new Comac line of infra-red dryers and air-drying units. Personnel: M. Weiss, E. A. Mitchell, H. L. Taub.

PORTLAND CO. Booth 274. Display of electronic Chapman static climinators; Model 2K Portco portable drum rinsers. Personnel: F. E. Hanscom, J. J. Sapp. Hotel: Palmer House.

POTDEVIN MACHINE CO. Booth 810. Exhibit of Type Z 27-in. gluing machine; Type LM 6-in. label paster with semi-automatic feeder; Type MG 4-in. ductor roller margin gluer; Type 2R 12-in. coating machine; Type LA 6-in. label activator, top-side margin gluer; also photographic display of bag machinery. Personnel: J. H. Richmond, R. A. Potdevin, J. S. Hamilton, J. S. Hawkins, H. E. Hummel, A. G. Miller, M. B. Jones, C. E. Duerr, J. Donohoe, S. Norton, O. Denton, Hotel: Bismarck.

PRINTING MACHINERY CO. Booth 1002. Exhibit of die-cutting machine for die cutting labels at speeds up to 300,000 per hour; Sterling toggle-hook and base system for mounting and registering flatbed letterpress plates

used in carton and label printing; Warnock rotory hook system for mounting and registering rotary letterpress plates. *Personnel:* L. Augustine, C. Brestel, J. K. Carlin. *Hotel:* Harrison.

PYROXYLIN PRODUCTS, INC. Booths 602, 700. Literature available describing lacquer and hot-melt packaging materials as they are used as adhesives, protective coatings, functional coatings for paper, aluminum foil, films. glassine, etc.; adhesives for skin and blister packaging, enveloping compounds, wax additives and fortifying agents for coating and laminating. Personnel: C. E. Fawkes, P. Yoder, G. Hollinger, D. Getz, W. Ashley, D. Fawkes, Hotel: Windermere.

R. C. CAN CO. Booth 164. Complete line of fibre cans and tubes; new foil can for frozen-juice concentrates and allied products; line of E-Z open refrigerated dough containers; also new line of plastic snap-in closures and plastic containers for dairy and vending industries. Personnel: H. J. Schmidt, G. D. Flotron, J. Hines, V. G. Biedenstein, E. J. Menard, W. G. Fienup, L. P. May, J. Rovin. Hotel: Sheraton Towers.

RADIANT COLOR CO. Booth 183. Fluorescent color in packaging featured. Personnel: B. Clark, B. O'Donoghue, B. Voegele, E. Franz.

RAPIDS-STANDARD CO., INC. Booths 609, 610. "Materials Management for Greater Productivity and Profit" to be featured theme; display of coordinated power and gravity conveyor system which can be applied to organize and increase productivity; Bi-level, live storage Flow Rack coupled with automatic order combining and shipping set-up. Personnel: E. Meleski. Hotel: 50th on the Lake Motel.

RAYMOND BAG CORP. Booth 416. Exhibit of new MPS Multiwall Perfect Seal bag for packaging items now using more expensive types of containers where they proved deficient in moisture protection, the bags being made by forming the multiwall bag around polyethylene tubing, the bottom sewn and heat sealed, resulting in a seamlesstube package; Rotomatic packaging equipment. Personnel: E. H. Pyle, K. E. Lott, C. E. Davis, J. P. Propst, R. G. Roberts, R. J. Stevens, R. T. Rose, W. R. Raleigh, E. E. Heydt, J. M. Greene, J. Agin, W. E. Noble, M. F. Keane, E. J. Richards, T. H. Bacon, C. L. Mers, J. R. Clements, D. F. Wicks. Hotel: Palmer House.

REYNOLDS METALS CO. Booths 622, 624. Exhibit of aluminum foil "packages of the future" designed for convenient re-use by consumers, including whiskey pre-wrap which opens into two containers for ice, chips, etc.; three-piece aluminum cans for frozen-juice concentrates and motor oil; impact-extruded cans for beer and aerosols; drawn-and-ironed cans for beer and soft drinks; shallow-drawn cans for

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WITH FF GLUE GUNS

You can throw away your messy rolls, clagged brushes, open glue pots when you install FF glue guns. And you cut gluing costs up to \$3%! Because the amazing FF system is totally enclosed, engineered to put glue exactly where you want it and in the precise amount required . . . fast, efficiently and without waste. Over 600 stocked models handle mest mechanical and manual operations... with specials and miniatures available to meet any unusual gluing conditions. Easy to install and operate. Fully guaranteed. Thousands of enthusiastic users. Illustrated catalog available upon request. Write, wire or phone for your copy today.

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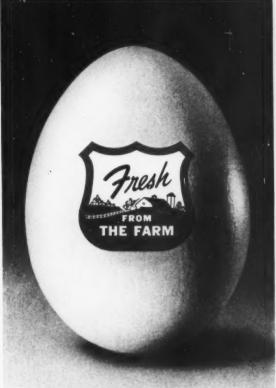
-Short runs, spec. materials Models available for automatic packaging of most products

in flexible pouches. Speeds up to 800 packages per minute.

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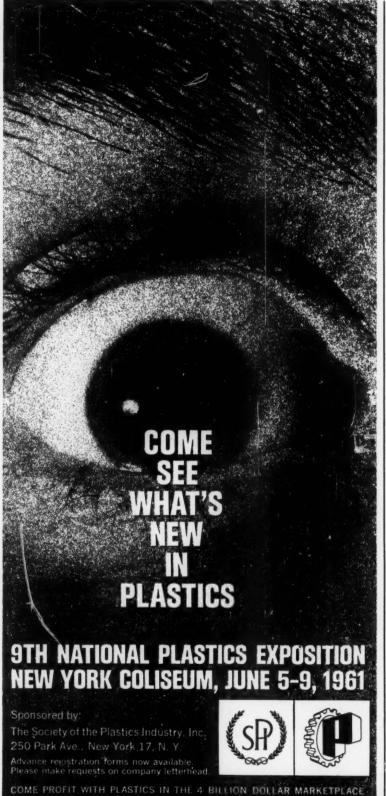
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PARAMOUNT PAPER PRODUCTS



tuna, shellfish, potted meats; deepdrawn cans for vienna sausage, baby food, processed fruits, vegetables and meats; aluminum-foil cartons, including register embossed cartons for food products; polyvinyl chloride plastic films for shrink wrapping; water-soluble polyvinyl alcohol films for bleaches, detergents, etc. Personnel: P. Murphy, P. Dearborn, F. Liebert. Hotel: Drake.

RHEEM MFG. CO. Booth 408. Exhibit of steel shipping containers, drums and pails; Sterilpack food containers; Rheemcote decorated packages; centrifugal-lined packages. Personnel: A. W. Nides, J. P. McNicholas, D. E. Hood, H. J. Altenbern, J. H. Mitchell, R. H. Morrison, G. W. Sherlock, J. J. Mulholland. Hotel: Blackstone.

RIEGEL PAPER CORP. Booths 535, 536, 538. Carolina Div. Foldcote folding cartonboard and other bleached board stock featured; cartons made with Foldcote to demonstrate strength, whiteness and rigidity of the board.

Folding Carton Sales Dept. New concept in carton design illustrated by custom and stock cartons for poultry, dairy and meat products.

Lassiter Div. Bags, overwraps and cartons on display, stressing design and creative services offered to soft-goods manufacturers and retailers.

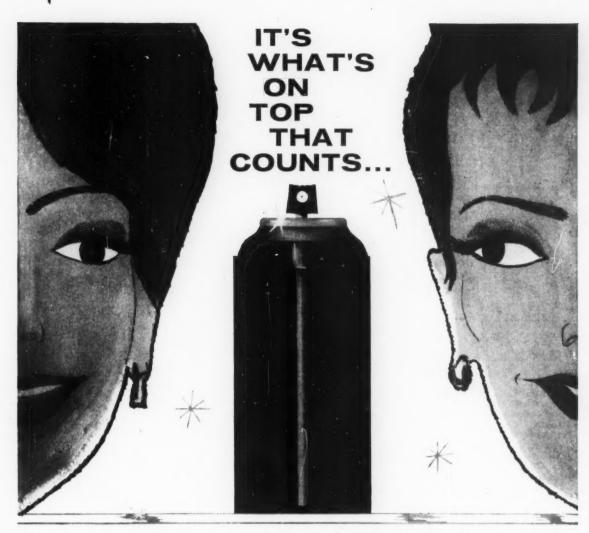
Skin-Pak Div. Skin-packaging system with Skin-Pak machine and special combination films demonstrating 60-package-a-minute production for use in hardware, tools, notions and electronic-parts industries.

Specialty Products Div. Exhibit of carton liners, pouches and bags made with papers, glassines, films and foils for use by a wide variety of food and drug products.

Personnel: F. S. Leinbach, R. L. Kerridge, W. Endicott, G. E. Oakley, Jr., F. M. Jennings, R. L. Hoff, J. E. Hutchinson, E. Reed, F. J. Dowie, R. W. Chappell, J. V. Shea, E. Pioppo, J. Field, C. E. Schaehrer, N. W. Postweiler, E. G. Penn, W. E. Butler, W. F. Collins, C. W. Hoffman, R. W. Schlienz, W. W. Cross. Hotel: Palmer House.

ROBINS ENGINEERING CO., INC. Booth 112. Exhibit of aerosol packaging equipment, including aerosol-valve decrimper and remover, automatic pressure testers, product fillers, crimpers, coders and Freon pumps; also coffeecream packing machine, utilizing laminated-foil blister package. Personnel: M. Robins, A. Robins, H. De Matteis, J. Paselle. Hotel: 50th-on-the-Lake Motel.

ROSENTHAL MFG. CO. Booth 152. Display of Wrap-O-Matic, featuring complete operational flexibility for feeding and cutting from roll stock pre-determined polyethylene sheet size from 9 to 94-in. long; impulse heat sealer, instantaneous impulse heat triggered by operator only during sealing operation with heat level adjustable for various film gauges. Personnel: H. Rosenthal, B. Rosenthal, W. Andrews. [Continued on page 371]



Count On Newman-Green Valves For Finer, More Uniform, Mistier Spray Patterns Newman-Green's exclusive spray head design produces a uniform spray pattern that is finely atomized and evenly dispersed. The unique two-tone spray head assures quick, positive identification of the orifice opening. Direction of the spray pattern is always immediately apparent.

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The built-in quality of Newman-Green valves attest to the thorough inspections and control methods, necessary to providing the pressurized packaging industry with the best valve obtainable. Its dependable operation sparks consumer acceptance and that's what counts! Call your nearest Newman-Green representative today for pertinent help in solving any of your aerosol packaging problems.

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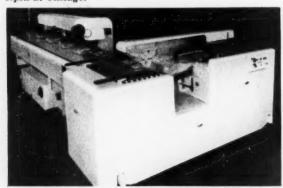


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Here is the first fully automatic integrated system that offers top efficiency, lower costs, and extra sales appeal through plastic bag packaging operations. One operator tends the Carbert machine combination which turns out over 40 neatly contoured packages per minute.

As flexible as it is fast, the Loader-Sealer adapts to a broad range of products — bakery goods, textiles, garments, knit goods, magazines, to name a few — and a wide range of plastic bag sizes and shapes. With automatic loading, the result is uniform packages.— all identical in size, seal and overall appearance.

Write for full details on how this modern equipment can improve your profit picture in film packaging. See these machines in operation at the National Packaging Show in April at Chicago.



The Carbert film bag-loading and sealing combination

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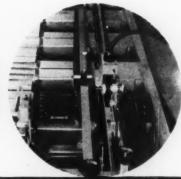
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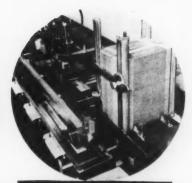
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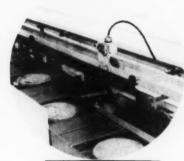
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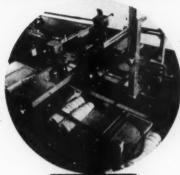
FOR COOKIES AND CRACKERS



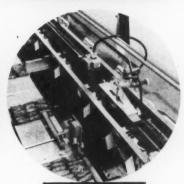
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SCOURING PADS

the perfect combination of speed and flexibility CECO MODEL 50 AUTOMATIC

Here is the machine specifically designed for the problem package — rolls of aluminum foil, sanitary napkins, paper products, cookies — any product that can take advantage of CECO's bucket feed method. Automatic? Right, fully automatic. This is a constant motion cartoner in which the carton is opened, product inserted, and carton closed — automatically. The opportunities to save on labor costs are exceptional. Flexible? Right again! Changeover from a 7" roll of aluminum foil to an 18" roll takes less than 30 minutes. And, like all

CECO cartoners, the Model 50 can be had to handle either glue or tuck style cartons and can be accessorized to meet individual requirements.

A MACHINE FOR EVERY REQUIREMENT

Other CECO machines include the Model 3901 glue sealing machine, the Model 40 semi-automatic cartoning machine, and the Model 45 fully automatic.



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The BEM MULTIPLE PACKETER

designed specifically for packet forming and filling with

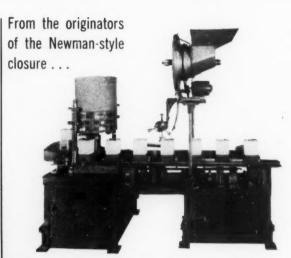
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With this simple, rugged machine one man can form and fill up to 350 packets per minute in one continuous operation. Pressure, temperature (up to 500° F) and dwell times are precision controlled for perfect sealing of a wide variety of films and laminates. Write for complete literature, and submit samples of your products for test packaging at our Customer Service Laboratory.



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SIRLOIN

42nd and HALSTED STREETS CHICAGO 9, ILLINOIS ST. REGIS PAPER CO. Booths 403, 404, 405, 505, 507. American Sisalkraft Co. Div. Variety of paper, film and foil laminations for protective wrapping and packaging to be on display. Poly-Lok, new polyethylene sleeve for fully automatic closure of pasted valve multiwall bags; Capcote-PE, specially processed polyethylene-coated kraft paper; Force Flow packer; wide variety of latest bag-packaging equipment.

Container Div. Exhibit of printed linerboard for corrugated containers, printed before going through the combination operation and made into corrugated hoard; BAX combination bag and box shipper; giant Bulkpaks; Presseal, patented closure system for self sealing of corrugated boxes requiring no tape, glue or stitching; Wet-Lok specially treated corrugated shipper for fresh produce; also display of colorful corrugated samples.

Folding Carton Div. Pollocote semiplastic coating for board which emphasizes color, design and printing of icecream and other consumer cartons, and provides both inside and outside protection; Trox consumer box, which converts to a serving tray; Kliklok highspeed automatic packaging system; Metl-stay metal-cornered folding cartons; complete line of cutter cartons;

different applications.
Gummed Products Co. Div. Full line

of box and sealing tapes.

Panelyte Div. Special foam container

also prize-winning cartons for many

to be on display.

Product Development Dept. New paper-plastic packaging combinations; Strylam, polystyrene foam film laminated to paper for use where insulative, greaseproof and non-abrasive qualities are required; PE-pouch bag, a heat-sealed, free polyethylene pouch within a multiwall bag; molded foam and corrugated combinations for interior shipping protection; Fomecor, a foamed polystyrene sandwiched between two sheets of specification kraft; also "liquid containers," polyethylene-coated paper bags or plastic bottles within corrugated boxes.

Sherman Paper Products Div.. Exhibit of line of corrugated and fluted products for packaging baked and other consumer goods.

SCALE SPECIALITIES, INC. Booth 284. Display of completely redesigned Datamatic weight calculator. Personnel: J. O. Black, D. A. Hansen.

SCHJELDAHL, G. T., CO. Booth 710. Exhibit of 56-in. combination side-weld bottom-seal bag machine and attachments; polystyrene tray-sealing machine for making airtight seals on oriented polystyrene pre-formed tray. Personnel: J. Womack, T. Glasser, F. Ruenzel, M. Novotny. Hotel: Palmer House.

SCHROEDER MACHINES CORP.
Booth 426. Exhibit of Quadnumatic
automatic case opener and former,
package accumulator, packer and
sealer, pneumatically operated and oc-

cupying a space of 16 ft, in over-all length and approximately 28 in. in width. Personnel: A. C. Schroeder, R. F. Schneider, J. S. Bertling, A. C. Schroeder, Jr., J. I. Inglis, O. A. Tomei. Hotel: Shore Drive Motel.

SEALAROUND CORP. Booth 1229. Exhibit of two new, improved models of the Seal-a-round polyethylene packaging machine; new shrink tunnel which when used in conjunction with Seal-a-round machine provides a complete packaging department at low cost. Personnel: A. H. Mayer, R. Stone, R. Schrader, P. Faberson.

SHOPSIN PAPER CO. Booth 801. Exhibit of new polished gold and silver paper-backed foils; Mylar on foil; foil food lid; foil for seals and tags, both gummed and ungummed; foil boxboard and cartonboard; foil-printed samples to illustrate how printed foil can attract. Personnel: M. Shopsin, M. Engler. Hotel: Congress.

SIGNODE STEEL STRAPPING CO. Booths 924, 1216. Exhibit of new AMP all-power-operated tool which tensions, seals and cuts the strapping by simply pushing a button; also operatorless M20 power strapping machine. Personnel: J. M. Moon, M. C. Carlson, J. R. Williams, R. C. Battle, C. H. Carlson, R. S. Schwerman, C. J. Pfeiffer, R. D. Bowman, R. I. Laggren, A. N. Drechsel, P. J. Gerlach, A. E. Keller, G. C. Mickelsen, M. J. Graham, J. B. Whitnell, K. B. Casey.

SIMCO CO. Booth 1111. Exhibit of static eliminators for all types of filmconverting and packaging machinery; metal-encased static bars, general-purpose eliminators which are highly efficient neutralizers at low cost; Super Service static bars; new Type ME shockless static bars which may be used where a fire hazard is present, such as in coating and laminating machines; anti-static cleaning devices incorporating air with a static eliminator; ionizing air guns and Aerostats which incorporate a static eliminator in the outlet of a centrifugal blower; new bottlecleaning nozzle small enough to fit in the neck of a bottle for cleaning inside: electrostatic locator for analyzing static problems; Neutro-Stat anti-static material in an aerosol and in bulk form; animated display illustrating static and its elimination. Personnel: M. Roberts, H. A. Schweriner.

SIMON ADHESIVE PRODUCTS CORP. Booth 116. Demonstration of automatic conversion of Eze-Stik roll-label stock into die-cut finished labels; dispensers designed to use roll-type pressure-sensitive labels; several highly decorative pressure-sensitive materials based on metallized Mylar and Mylar/vinyl laminates with decorative embossed patterns suitable for use in packaging plastic items; end uses of Eze-Stik. Personnel: S. Simon, J. R. Orlando, A. Berk, R. P. Driscoll, J. Fernandez. Hotel: Executive House. [Continued on page 373]

STILL USING OLD FASHIONED TAGS?



Let National Tag Company's free design service show you how to put more wallop in your product merchandising.

In this day and age, only the most compelling advertising gets the customers' attention. Old fashioned, dull tags and labels that merely classify your product simply aren't enough anymore.

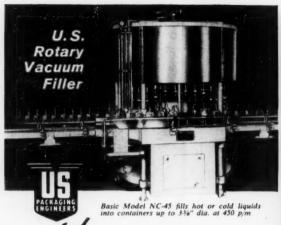
National Tag Company offers expert, free design consultation on:

- New tags or pressure sensitive labels. Our experienced creative design staff will design you a die cut tag or pressure sensitive label that will move your product and put you a step ahead of competition.
- Old tags or labels. Send us your old tags or labels. Let us show you how they can be improved to give new push to your product.

AND REMEMBER

trade your old, time-worn shipping tags and labels for National's dynamic new advertising tags. They do so much., and cost so little.





Hundreds in Use
YET, NO TWO ALIKE!

The name, "U. S. Rotary Vacuum Filler" represents a wide line of models rather than an individual machine. These are basic models that vary in capacity from 16 to 45 filling tubes and are designed for implementation with standard adaptations to serve the individual requirements of each user. No two machines are ever alike.

Thus, U. S. filler engineering provides both: the efficiency of a custom-built machine and the practicability of standard machine parts. This together with exclusive features provides the lowest filling cost possible. For full details, please write for the "Rotary Filler Bulletin."



Most Versatile Multiple Filler

MODEL B-49 STRAIGHT-LINE VACUUM FILLER. For liquids and semi-liquids. Fills 4 to 9 containers simultaneously. Adjustable for all container heights up to 14". Stainless steel is standard; plastic on order. Discharge conveyor is optional. Write for "Bulletin B-49".



MODEL B-2 VACUUM FILLER. Fills 2 containers while 2 filled containers are being removed and 2 empties loaded. Handles containers up to 4½" dia. up to 13" high. Stainless steel construction. Plastic available. Write for "Bulletin B-2".

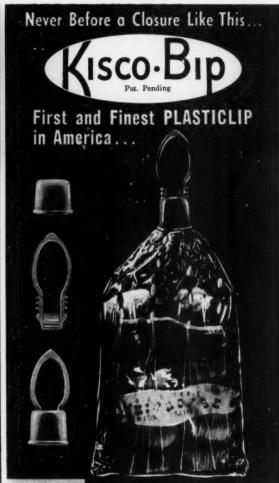


For All Liquids • All Containers

Also for foamy products that do not permit agitation. Stainless steel filling tubes. Fill controlled automatically. Glass lined tank. No power required. Write for "Siphon Bulletin".

U. S. BOTTLERS MACHINERY CO.

4017 N. ROCKWELL ST., CHICAGO 18, ILLINOIS
Boston - New York - Philadelphia - Los Angeles - San Francisco - Seattle - Houston
Denvor - Pertland, Ore. - Kansas City - Tucson - Jackson, Miss. - Atlanta - Montreal
Terento - Vanceuver - Winnipus - Santiago - Sao Paulo - Honolulu



Cimple on A-8-4



Versatile, ReusableIdeal for Display Racks

Air-Tight Closure



It's here—newest, most exciting advance in today's packaging — the KISCO-BIP PLASTICLIP.... Tremendously successful on the Continent, this patented clip is now earning great acceptance as an American-made product. A foolproof, sanitary, easily-attached closure for polyethylene bags, it offers airtight protection against humidity, leakage, odors, mildew, hardening, temperature changes, decomposition. Made in a variety of colors, in three sizes to fit all types of bags. KISCO-BIP is used both for original closure—or included in packages for all resealing purposes.



Write for complete data on how Kisco-Bip can increase Your sales

KISCO-BIP CORPORATION

JOHN L RIE Inc. Sale Mfrs. and Distributors 196 Ashburton Ave., Yankers, N.Y. Phone Yankers 5-9510 [Continued from page 371]

SINCLAIR & VALENTINE CO., Printing Ink Div., American-Marietta Co. Booths 811, 812. Personnel: H. J. Soriano, L. M. Pfister, T. B. Buchanan, R. L. Benemelis, R. D. Roosen, N. B. Pittman, Jr. Hotel: Palmer House

SKOLNIK DRUM CO. Booth 182. New steel drums on display.

SMITH, H. P., PAPER CO. Booth 1127. Display of Polycel polyethylene-coated cellophane; also Flxol polyethylene-coated stretchable wrapper. Personnel: C. C. Sherman, J. C. Davis, A. E. Gerken, G. H. Sullivan, J. F. Pendexter, E. C. Parke, J. H. Sullivan, J. W. Campbell, J. F. Oswald, E. H. Townsend, E. J. Mack, V. C. Anderson, J. A. Richter, G. Williams, R. C. Brown, J. J. Miller, L. A. Peterson. Hotel: Pick-Congress.

SOHN MFG., INC. Booth 1256. Display of standard line of flexographic sign and label makers; new Model 6056-H heavy-duty, hand-operated unit for making labels and sales messages from 1 by 1 in. to 5 by 15 in. without adjustment on pressure-sensitive bumper stickers, signs, sales messages, labels, etc. Personnel: L. Thiessen, L. Walthers, M. Delaruelle.

SOUTHERN ADHESIVES CORP., Booths 1049, 1050. (See The F. G. Findley Co.)

SPEEDRY CHEMICAL PRODUCTS, INC. Booth 353. Giant Magic Marker applicators to be featured. Personnel: M. G. Raymond, B. Richmond, C. Marmon. Hotel: Ambassador East.

STANFORD ENGINEERING Co. Booths 1009, 1011. Complete line of standard and turret-type unwinds and rewinds; single and multiple-shaft slitting equipment; vacuum and hydraulic web guides; miniature, full-scale working models demonstrating the PH series web-guiding equipment. Personnel: W. T. Stanford, W. Stanford, O. E. Stanford, G. R. Brockway, R. R. Buckle, R. W. Payton, G. E. Mansfield, G. W. Kcates. Hotel: Palmer House.

STEIN, HALL & CO., INC. Booth 522. Exhibit of comprehensive line of adhesives for all types of packaging; adhesives with special characteristics with emphasis on newer type of resin emulsion adhesives; wide variety of products in which company adhesives have been employed. Personnel: D. H. Lipman, R. Shoals, R. Selner, J. Rapp, N. DiMasi, R. Hahn, C. Nevin, M. Stettner, E. Myers, D. Andersen, G. Streit, F. Swanson, G. Thompson, F. Katzenberg, L. Reuter, B. Shoals, B. Weiser, R. Bruno, K. Miller. Hotel: Shore Drive Motel.

STERLING FLEISCHMAN CO. Booth 108. Exhibit of powered-operated Model CP-1 one-man drum life. Personnel: M. M. Fleischman, V. Miners. Hotel: Pick-Congress.

[Continued on page 374]



NEW! FOUR-WAY BAG HEAT SEALER DOES THE WORK OF FOUR MACHINES...

V SEALS UP TO 900 BAGS OR POUCHES PER HOUR

- Polycel bags and pouches
- · Cello bags
- · Polyethylene bags
- POĹY-CÓATED KRAFT bags for government specs work Solid cast aluminum; newest heat input regulator. Nothing like it on the market!



ECONOMY MODEL FOOT SEALER



 Lowest price in the field!
Solid aluminum with automatic thermostat, foot pedal and chain. (Stand optional.) We are heat-sealing specialists who design and make machines of all sizes and types to cut packaging costs and increase production.

See our line in Booth 1021, AMA Show
 Chicago
 April 10-13

Some dealerships still available.

Write for literature or information to -

BAG-O-MATIC
Packaging Equipment Co., Inc.

4300 MELROSE AVENUE LOS ANGELES 29, CALIF.

Highest quality virgin polyethylene

Any size in all thicknesses (.0006 to 10m)

For converters, distributors and packagers

Special department for drum and box liners 100% liquid-proof bags available

Our bags meet government specifications when desired

> Millions of bags in stock for immediate delivery

Increased service means 1-3 day deliveries

> Latest in machinery and equipment

From extruding to bag -all under one roof

We manufacture the most complete line of bags at the most competitive prices ever offered in the bag market. Contact us-and discover that our service is a fact, not a promise!



polyethylene bag mfg. co., inc.

169 Franklin Ave. Brooklyn 5, N.Y. Phone: TR 5-0794-0387

Formerly Koby Bag Mfg. Co.

[Continued from page 373]

STOFFEL SEALS CORP. Booth 1254: Custom Seal Div. featuring new designs and types of "Prestige" seals used on wearing apparel, fabrics and other consumer items; new custom-engraved consecutive numbering on selected metal-alloy seals for quality-control and inspection purposes; consultants on hand to discuss and suggest design ideas. Personnel: H. F. Stoffel, T. G. Keller, R. P. Freybourg, E. A. Plattner, J. B. Betti. Hotel: Conrad Hilton.

STOKER, H. L., CO. Booth 209. Display of new Stok-Aire pressure packer; DX packer with new improvements; electronic weighing system. Personnel: H. H. Roberts, E. T. Foster, R. Schmitt, F. E. Higgins.

STRAPPING MATERIALS Booth 281. Display of complete line of package reinforcement and closure materials, highlighted by powered semi-automatic steel-strapping equipment. Personnel: P. Garman, H. Mitchell, B. Garman, R. Richardson, H. L. Menzies, L. Ketchum, D. W. Fiedler.

SUN CHEMICAL CORP. Booths 421, 422, 424. Artistic Mfg. Co. Div. Exhibit of packaging materials: machine producing Christmas bows and ribbons.

Chemical Coatings Div., including A. C. Horn Products Finishes and Coating Materials Laboratories. All types of containers, liners, coatings, decorations, caps, etc., on display.

Dyna-Foam Corp. Sub. Extruded foam in packaging materials.

General Printing Ink Div. Exhibit of inks for letterpress, lithography and flexography.

Facile Corp. Div. Adhesive tapes: products for home and defense. Hotel: Sheraton-Blackstone.

SWITZER BROS., INC. Booth 132. Exhibit of new printing-ink product samples; packages printed with Day-Glo printing inks, letterpress, litho, gra-vure and silk screen. Personnel: G. D. Russell, R. J. Perrin, W. D. Geib, W. S. Hart, A. Lozzi, F. E. Switzer. Hotel: Shore Drive Motel.

SYNTRON CO. Booth 618. Several operating, closed-circuit displays involving vibratory feeders and parts feeders; spiral elevator; electromagnetic bin vibrators; vibrating packers; screening feeders; flow-control valves; hopper-level switches; flow switches; small 1cu.-ft.-capacity vibratory mixer. Personnel: W. A. Smith, J. Sarver, S. D. St. Clair, R. Lubold, D. Eget, A. M. Burch, R. B. Dietsche, R. N. Smith, F. W. Knapp, T. E. Thornton, R. P. Bentzien, R. G. York.

TECHNICAL TAPE CORP. Booth 919. Exhibit of high-speed automatic labeler for applying pressure-sensitive labels at high speeds with high accuracy to any type of surface; unit designed to handle any size or shape of label up to 3 sq. in., foil or thin film; printing attachment also available. Personnel: M. R. Stohl, B. Jacobs, J. Grossan, P.

THE NEW AUTOMATIC **FAIRCHILD**

Counter and Packer ...



See Us At The Show

Booth 1021

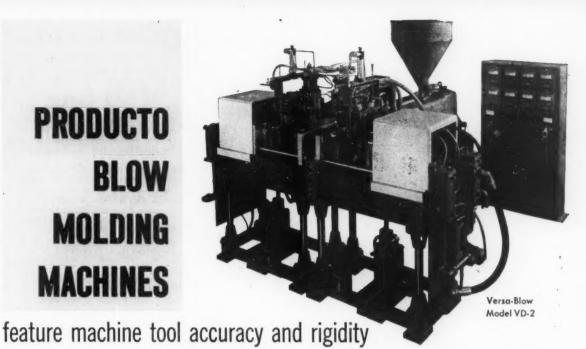
The new Fairchild 33A automatic electric counting and filling machine is ideal for packaging small items such as tablets, seeds, capsules, candies, etc. The new unit features twin delivery chutes and will count and fill a predetermined number of pieces at speeds up to and above 80 containers per minute, depending on part size and count. The Fairchild 33 has a variable-speed, rotating counting disk which is mounted on a stainlesssteel table top. The 33-in. disk has a number of counting holes which are designed to segregate products in specified numbers for filling. Each disk is custom-made to the counting requirements of the user. The counting disk is fed from a large-capacity transparent plastic hopper, permitting visual control by the machine operator. The machine's table top can be tilted (from 18 to 49 deg. of elevation) to facilitate distribution of products. Two independent vibrators help in this operation. The two delivery chutes which carry the product from the counting disk to the containers are tapered to receive adapters that permit the filling of containers of varied aperature and height.

> For automatic counting and filling machine

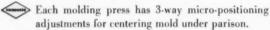
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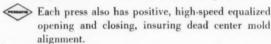
4864 Eagle Rock Boulevard Los Angeles 41, California

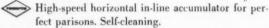
PRODUCTO BLOW MOLDING **MACHINES**



Precision and dependability, the distinguishing features of Producto machine tools, are built into the complete new line of Producto blow molding equipment!







> Three separate head adjustments regulate parison weight, concentricity and straightness.

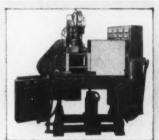
Platen "daylight" opening is adjustable, Accommodates dies of various thicknesses without shimming. Speeds set-up.

Advanced head design assures trap-free flow of parison. No dead spots!

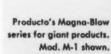
> Hardened steel head and flow passages are polished and hard chrome plated.

Eight models include 1, 2, 4 and 8 parison head arrangements. Capacities vary from mothball size to 80-gallon drum size! Building-block construction provides an unlimited range of combinations to suit your exact needs.

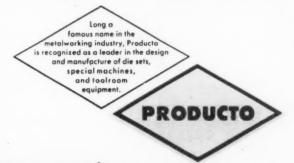
Be sure to see the most durable, accurate and trouble-free blow molding, reaming and accessory equipment ever offerred to plastics manufacturers! For additional information or to arrange to visit Producto, call FOrest 7-8675, or write today:



Flexible Versa-Blow series includes the single press Mod. VS-1







PLASTICS MACHINERY DIVISION | THE PRODUCTO MACHINE COMPANY | 985 Housatonic Ave., Bridgeport 1, Conn.



With CEL-FIBE Wadding... the proof is in the package

Systematic sampling is a new convenience in making your own performance tests of Cel-Fibe superior cellulose wadding, a complete line of versatile materials—plain or embossed, bleached or unbleached, moisture resistant or absorbent—for padding, cushioning, bracing, blanketing, and surface protection during shipping, handling, and storage.

Without waiting for a sample requisition to be processed through the mill, your distributor will furnish you with a carton holding a generous roll of Cel-Fibe wadding in the form most suitable to your application. In your own plant, you can see why "success is certain with Cel-Fibe" in meeting civilian needs and military specifications for protective packaging:

- Softness non-abrasive, to safeguard fine finishes and delicate surfaces
- Strength—to brace package contents, avoid rejects and returns
- Continuing bulk to resist stress and recover from compression
- Neutral pH and low sulfur content to keep metals from corroding
- Easy handling pliability, no mess in wrapping or in unwrapping
- Easy maintenance no dusting or powdering, less clean-up time
- Economy savings in time and labor, materials and handling stages

Cel-Fibe is always available from a dependable source, when and as you need it. For the name of your nearest distributor — write, wire, or phone:

CEL-FIBE

Division of Personal Products Corp.

Milltown, N. J. • Milltown 8-0700

CEL-FIBE AMA Show Headquarters at Executive House, April 10-13

Sbarra, B. Keith. Hotel: Palmer House.

TEE-PAK, INC. Booth 401. Bands for multiple packaging on display. Personnel: W. J. Hlavacek, F. J. Pool, W. F. Shaughnessy.

TELE-SONIC PACKAGING CORP. Booth 1039. Exhibit of baling machines. Personnel: H. Bardach, C. MacRae, F. M. Warden, H. Thomas. Hotel: Sheraton-Towers.

THATCHER GLASS MFG. CO., INC. Booths 42B, 429. Exhibit of plastic squeeze tubes; Celon secondary closures; glass bottles and jars; consumer ovenware. Personnel: H. E. Griffith, J. Welsch, J. S. Adams, H. M. Palmer, K. E. Glidden, H. V. Owens, E. W. Owens, F. L. Criss, T. J. Doane, W. R. Rifenburgh, L. L. Chandler, J. L. Stanley, L. J. Trecek. Hotel: Executive House.

THOMSON-NATIONAL PRESS CO. Booth 706. Exhibit of new air clutch-double micrometer die-cutting and creasing press with self-adjusting air clutch. Personnel: A. Aronson, J. Millan, L. A. Whittaker, M. H. Pleau. Hotel: Statler.

TIPPER TIE PRODUCTS OF N. J., INC. Booth 917. Display of remote-control bag- and casing-tying machines. Personnel: A. Steckman, G. Manahan, B. Orr, K. Lewis, B. Cleveland, H. Madden, H. Cramer, C. Heard, J. Scholl, C. Luther. Hotel: Conrad Hilton.

TOMPKINS' LABEL SERVICE. Booth 528. Exhibit of labels designed and manufactured by company in actual use on hundreds of diversified products and packages; pressure-sensitive, heat-seal, hag-header and continuous-roll labels, gummed and ungummed, for use with all types of high-speed automatic labeling equipment and their application to new-type packaging materials; "Pres-To-Mark" marking system for fast coding, pricing and imprinting. Personnel: J. Tompkins, W. Baile, R. Norris, W. Schlegel, E. Friday. Hotel: Palmer House.

TRI-WALL CONTAINERS, INC. Booth 222. Company containers and accessories on display. Personnel: A. Goldstein, E. H. Waldorf. Hotel: Bismarck.

TRONOMATIC MACHINE MFG. CORP. Booth 203. Exhibit of new four-station rotary blister sealer; new junior blister sealer; new BlistPack sealer; also new junior vacuum former. Personnel: J. Swick, S. Spielman, J. Mullen, V. Hanford. Hotel: Avenue Motel.

UNION BAG-CAMP PAPER CORP. Booth 636. First showing of K & M Randomatic case sealer which bottom and top seals cartons within wide range of random sizes at rate of 12 per minute and occupies only 5 by 7 by 7 ft. of space, Hotels: Palmer House, Executive House. [Continued on page 378]

PAPER and BOARD for modern packaging

There's hardly an industry or business that doesn't have some use for some Gilman Paper Company products, produced under sustained quality controls at two fully integrated mills by the third generation of the founding family.

We Invite Inquiries:

BLEACHED SULPHATE BOARD for food packaging, drinking cups, cigarette cartons, milk containers, linerboard, file folders, and others.

BLEACHED AND UNBLEACHED KRAFT for all purposes including: colored kraft, creped kraft, kraft for laminating, waxing, asphalting, twisting, wet strength, pH control, water-repellent, insulating, vapor barrier, cable wrap, coin wrap, stuffer paper, masking paper and creped closure tape.

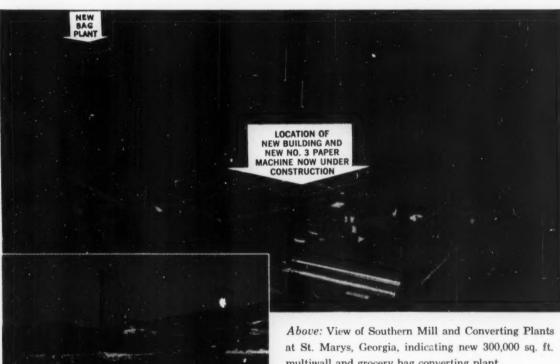
GUMMED SEALING TAPE regular and reinforced, in natural or colors, plain or printed

STAY TAPE, VENEER TAPE

CELLUCORD® (KRAFTCORD®) Cellufiltercord

GROCERY BAGS AND SACKS

MULTIWALL SHIPPING SACKS



multiwall and grocery bag converting plant.

Left: View of Northern Mill and Converting Plants at Gilman, Vermont.

Subsidiaries:

ST. MARYS KRAFT CORPORATION and THE KRAFT BAG DIVISION CELLUCORD CORPORATION

Time & Life Building, Rockefeller Center 111 West 50th Street, New York 20, N. Y. Western Sales Office: 400 W. Madison Street, Chicago 6, Ill.



G INDUSTRIES

293 Hudson St., Hackensack, N.J. Diamond 2-3684 [Continued from page 376] UNION PASTE CO. Booths 1049, 1050. (See The F. G. Findley Co.)

UNION STEEL PRODUCTS CO. Booth 935. Exhibit of Wendway curve and straight conveyors; slat-curve conveyor; automatic conveyor vertical switches; slider-bed conveyor; slat-roller conveyor; Palletainer and Palletainer Junior wire-mesh containers. Personnel: C. W. Steinhauer, H. D. Gardner, W. C. Bunn, H. J. Aughton, L. R. Bohm, J. S. Howie, W. C. Federhart, C. C. Averill, Hotel: Executive House.

UNITED SHOE MACHINERY CORP. Booth 1126. Exhibit of the Autokrat sealer, a compact, mobile and adjustable carton-sealing machine designed to incorporate cord-like Thermogrip hotmelt adhesive and associated applying equipment as labor-saving, instant-setting system for bonding top seam of automatic bottoming cartons; Hytronic cutting machine adaptable to such materials as cardboard, chipboard, fibreboard, paper and plastic sheeting. Personnel: T. R. Peterson, R. Bliss, G. V. Upton, P. E. Brown, A. D. Sedgwick, W. L. McBride, R. J. McGanan.

U. S. INDUSTRIAL CHEMICALS CO. Booth 1112. Selection of See-Safe automatic packaging machines on display; sample packages for visitors; Rotojet injection-molding machine, first turrettype injection molder; Roto Poly 200 bag-making machine which can handle polyethylene film of any density. Personnel: V. McCarthy, W. Funk, J. Moffett, P. Gisser, A. J. Antuck, H. Wilson, W. McDonald. Hotel: Conrad Hilton.

U. S. STEEL SUPPLY DIV., United States Steel Corp. Booth 414. Display of automatic carton-strapping line handling random-sized cartons, the number of straps per carton automatically selected according to size by an electric-eye control. Personnel: A. R. Johnson, H. H. Downs, T. W. Parker, D. E. Davis. Hotel: Pick-Congress.

VAC-TIE FASTENERS, INC. Booth 1023. Hermatic machine and bench-tie machine to be on display. Personnel: J. J. Frank, H. Maurer, H. J. Dolch. Hotel: Congress.

VARIGRAPH CO. Booth 335. Display of lettering instrument and lettering templets used for creating original display lettering art for camera reproduction or packaging-design layouts. Personnel: L. J. Jenson, F. W. Chamberlin. Hotel: La Salle.

VARN PRODUCTS CO., INC. Booth 105. Complete line of non-offset spray powders and non-offset spray solutions; literature available on non-offset sprays and new booklet entitled "Solvent Safety." Personnel: V. Von Zwehl, J. Von Zwehl, K. Nelson, J. Conroy. Hotel: Sheraton-Blackstone.

VERNON CHEMICAL & MFG. CORP. Booth 115. Complete line of pressuresensitive tapes, including masking, black sealer, freezer locker, carton sealing, waterproof cloth, vinyl, cellophane, acetate fibre, filament reinforced and bi-directional reinforced tapes conforming to Government packaging specifications; extensive line of polyethylene bags in both standard and special sizes. Personnel: J. F. Cohen, W. F. Carlson, C. Roher, S. Edelstein, J. Simon. Hotel: Bismarck.

VERTROD CORP. Booth 1052. Exhibit of hand, foot-pedal, electromatic and pneumatic powered thermal impulse heat sealers and trim sealers; special models for specific applications; impulse sealing in all thermoplastic materials and laminations; new gravity-feed slide machine that eliminates need for a sealer operator. Personnel: A. Fener, S. Fener, L. Gross, N. Langer. Hotel: Conrad Hilton.

VISKING CO., Div. of Union Carbide Corp. Booth 813. Display of Visqueen polyethylene film in various types for packaging produce, soft goods, bakery and other products; new Visolyte film, a clear polystyrene for window envelopes and overwrapping applications; Hylox water-soluble film for convenience packs of detergents and for chemical and industrial applications; also introduction of the company's new polypropylene film. Personnel: L. E. Houck, H. C. Byrne, Jr., R. J. Lindahl, A. A. Stella, S. S. Susser, D. W. Carlson, D. F. Langhan, W. A. Heinemann, C. J. B. Thor, D. Cronk, F. Baker, J. Biehl, B. Strickland, M. Miller, W. Epperson, J. Shiffler. Hotel: Palmer House.

WEB CONTROLS CORP. Booths 244. Demonstration of automatic torque, tension and speed control; the edge guiding of paper, plastic film; also material on new high-speed production winderslitter, a compact, versatile machine for laboratory, pilot plants and light production. Personnel: S. Frankel, H. Epstein, H. Woelk.

WEBER MARKING SYSTEMS, INC. Booth 344. Demonstration of hand printers and label-printing machines used in addressing shipments or identifying products; three semi-automated methods of cutting stencils used on hand printers and machines; new ink that dries in seconds on non-porous surfaces. Personnel: J. A. Weber, C. E. Ritter, J. E. Crassweller, T. A. Wagner, R. B. Davies, A. Wagner, C. Mangan, B. Darras, D. Kuby.

WEBSTER EQUIPMENT CO., INC. Booth 1036. Exhibit of Model GSA Elgin overwrapping machine; Elgin 2 cylinder non-stop piston-filling machine complete with bottom filling attachment; MRM Model SL-85 automatic straight-line labeling machine; Model GR-6 MRM semi-automatic straight-line gravity-filling machine with linear-plastic-bottle support. Personnel: D. M. Webster, N. Golbin, G. R. Stevens, E. Johnson, A. R. Stevens, W. Jensen, H. Manas, R. Manas, R. Mishkin. [Continued on page 380]

ANOTHER EQUITABLE PATENTED FIRST

POLOPP

U. S. Pat. No. 2071874

ALL-IN-ONE BAG & TOPPER FILLS FASTER - LIVES LONGER - COSTS LESS

Topper and bag are all one piece. Just fill and heat-seal. The pre-built, pre-sealed Topper is actually part of the bag. It is strongly reinforced with cardboard, polycovered and laminated for protection.

Cuts down packaging operation. Eliminates separate header, handling and stapling. Easy to load and close with standard automatic and semi-automatic filling and sealing equipment.

Cuts down printing costs. Topper and bag are one unit. Only one printing operation is necessary.

More space for sales message. The entire package back, front and header can be used for package design and selling copy. In addition, premiums, swatches or coupons can be inserted in bag before heat-seal.

Longer display life. No headers to get lost or damaged. No staples to damage contents or to tear the package. And the poly-covered, laminated, strongly-reinforced Topper - stays firm, resists soil and moisture.

Smarter package design. Your Pol-E-Topper can have a coordinated design on bag and Topper, created exclusively for you by Equitable. Equitable techniques of printing give you non-bleed, closely-registered colors never before achieved on polyethylene.

POL-E-TOPPER PACKAGES 1000-PLUS ITEMS

Household soft goods - men's clothing - women's clothing - children's clothing - notions - jewelry artificial flowers - toys - kitchenware - dry foods . . . endless more.



- TOPPER strong, cardboard reinforced, poly-protected with hole for rack display.
- Seal isolates contents from TOPPER . . . ideal for food and confectionary products.
- Super-welded seams.
- No staples to damage contents, package or cause injury.
- Special lip for easy filling from the bottom.
- Hinged single-ply reinforcement for ease in shipping.

To find out how POL-E-TOPPER can make TOP PROFITS for you, mail this coupon today.



Flexible Packaging Division



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Flexible Packaging Division, Equitable Paper Bag Co., Inc. 45-50 Van Dam Street, Long Island City 1, N. Y.

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Position.

Company name.

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NEW! Cuts rolls up to 20" in diameter . . . 85" wide . . . in one, lightning fast operation!

NEW! No rewinding needed, no lubrication necessary!

NEW! Lever 2000 pre-programs cuts of varied sizes...ar

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Also on display, the world famous LEVER 500 for slitting pressure sensitive tapes

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WESTCHESTER PLASTICS, INC. Booths 301, 400. Exhibit of blown bottles, injection and extruded products made from concentrates, and direct coloring procedure. Personnel: R. R. Kobok, J. F. Jiehle, F. Peterson, J. Jenle. Hotel: Edgewater Beach.

WEYERHAEUSER CO., Boxboard & Folding Carton Div. Booths 1207, 1208, 1209. Cartons and cartoning machinery on display. Personnel: J. B. Collett, T. J. Schaefer, R. P. Smith, L. E. Giuliani, W. D. Kenney. Hotel: Sheraton-Blackstone.

WEYERHAEUSER CO., Silvatek Div. Booth 1206. Modular concept of packaging to be featured; newly developed Ply-Veneer corrugated expendable pallet; new packaging applications in fields of missiles, electronics, palletized storage and others, Personnel: D. E. Anderson, R. J. Lewis, S. J. Engebretson. Hotel: Executive House.

WHITE, S. S., Industrial Div., Plastics Dept. Booth 106. Exhibit of plastic caps and plugs used as shipping protectors for such parts as hydraulic tubing, valves, meters, gauges, etc.; new caps for rectangular electronic connectors; new tapered protectors molded of elastomeric polyethylene. Personnel: J. Buck, F. Zambetti, C. Bryman. Hotel: Thunderbird Motel.

WOLVERINE FLEXOGRAPHIC MFG. CO. Booth 1053. Display of enlarged photographs of the company's standard equipment and several new and unique models, to be shown for first time. Personnel: H. Nagel, A. Dudas. Hotel: Pick-Congress.

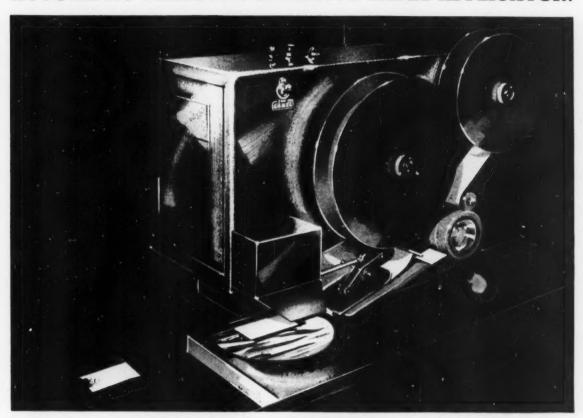
WOOD CONVERSION CO. Booth 510. Exhibit of Tufflex and Tufflex fabrics, protective cushioning, padding and waddings; prefabricated shapes and pre-backed material; also examples of commercial and Government packages. Personnel: W. W. McCarthy, J. Foeller, C. E. Swanson, W. G. Wolston. Hotel: Executive House.

WRAP-ADE MACHINE CO., INC. Booth 340. Exhibit of fully automatic Model UPCA unit-packaging machine with quick-change features and increased production rate for packaging flat items such as frozen steaks, hand-kerchiefs, powder puffs and similar items less than ¾ in. thick at production rates of up to 125 packages per minute. Personnel: R. F. Freebody, A. M. Powell, W. L. McCambridge. Hotel: Palmer House.

WRAPS, INC. Booth 101. Exhibit of Piek Super-Wrapper wrapping machine. Personnel: G. Rawak, E. M. Porter, R. Piek. Hotel: Bismarck.

YAHNKE, J. G., CO. Booth 802. Display of Rotomak sprayer; wax sprayer; dry spray. Personnel: G. Yahnke, J. Yahnke, J. Johnson, F. Lund, F. Crane, D. Heltsley, B. Schotanus. Hotel: Conrad Hilton.

FROM KLEEN-STIK WORLD'S FIRST "JET-ACTION"
AUTOMATIC PRESSURE-SENSITIVE LABEL APPLICATOR!



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JET-FAST . . . JET-SMOOTH . . . JET-PERFECT!

Actually picks up and applies labels by "AIR-JET" Action I

- In-coming air jet picks up label as it peels off backing
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Here's the machine that brings new speed, ease, and economy to pressure-sensitive labeling on the production line. Unlike "conveyor-type" applicators which pull the label from the backing by adhesive tension, the Kleen-Stik "Label-Aire" operates on an entirely new "jet action" principle. Manufactured to highest quality standards . . . thoroughly tested for reliability . . . guaranteed by Kleen-Stik.

No Heat - No Water - No Glue - No Hand Operations!



Plants in Chicago, Newark, Los Angeles, and Toronto, Canada

- Handles Kleen-Stik Roll Labels from 1/2" to 3" wide
- Labels any material any shape of package
- Perfect registration—adjustable to any production line speed
- Compact . . . lightweight . . . easy to use
- Available on lease no heavy investment

Write for complete details on the new Kleen-Stik "Label-Aire"

SEE IT IN ACTION! PACKAGING SHOW-BOOTH Nos. 1238 & 1239

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PONY LABELDRI FOR SALE—1958 Model 86TO, 110-220 V. single phase 60 cycle motors with variable speed control and friction clutch. 110V control panel. Machine in excellent condition, very little use. For fat thermoplastic labels easily converted for wrap-around labels. \$1600.00. Reply to Kellogg Brush Mfg. Co., Westfield, Mass.

TABLET PACKAGING LINE—For Sale or Lease—Lakso 48 Filler—Lakso 52 Cottoner— Resina Capper—Standard Knapp Labeler— N.J. Code-O-Matic Printer. The Edlaw Pack-aging Co., Inc., 88-61 76 Ave., Glendale 27, L.I., N.Y. Phone IL 9-1150.

FOR SALE: PNEUMATIC SCALE CO. Automatic Feeder and Bottom Sealer, Pneumatic Filler, Top Sealer, Tite Wrapper. Bought new in 1957. Excellent condition. Reply Box No. 417, Modem Packaging.

ROTO-WRAP MODEL 300 WRAPPING MA-CHINE. Three years old. Initial price \$16,500. Used for wrapping cheese, will wrap low, flat products in any heat sealable wrap-pers. In good condition. Completely equipped with registration controls, coding device, and gas flushing equipment. Inquire L. D. Schreiber & Co., Inc., P. O. Box 610, Green Bay, Wisconsin.

FOR SALE: ONE MODEL 86ML Labelrite 3 years old—excellent condition. General Nutrition Corporation, 306 Seventh Avenue. Pittsburgh 22, Pennsylvania.

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Model FA, FF, FFH, FA2, FA3 and FA4
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DW-4 Wrappers. Ceco Models 40GG, 40TT,
45GG, A-3901-12 and 18 Cartoning MachinesPackage Machinery Palmer Carion Gluers
and Traylocks TL100A, TLA and TLB.
Stokes and Smith Model A Volumeric
Transwraps also Model A Auger and Model
B with 4-scale Net Weigher. Pneumatic
Scale Automatic Carton Feeder. Bottom
Sealers, Wax Liners and Top Sealing Units
with Interconnecting conveyors. Pneumatic
Scale Tite Wrap. Standard Knapp, Ferguson,
A-B-C Case Sealers. Fillers, Labelers, Cappers, Mixers, Grinders. Union Standard
Equipment Company, 318 Lafayette St., N. Y.
12, N. Y. Phone: CA 6-5334.

DISCOUNTS ON USED Packaging Machinery. Biner-Ellison Labelmatics, Filabelmatics, Feedomatic-Air Cleaners—Cappers, Single and Multi-head—Liquid and Viscous Fillers—Labelers, spot, front and back, neck band—Case Gluers, Packers. Compression Units—adapted and guaranteed—traces—terms arranged. Package Machinery Exchange, Inc., 24—15 45 Street, Long Island City 3, N.Y. Yellowstone 2-1366.

Help Wanted

ASSISTANT PACKAGING ENGINEER—Expanding Mid-west greeting card manufacturer offers career opportunity to young man with experience in material handling corrugations, packing methods. General knowledge of folding cartons and packaging machinery helpful. Capable of recommending packaging improvements and possess sense of merchandising techniques. Excellent salary and opportunity for growth. Reply Box 409, Modern Packaging.

PLANT MANAGERS (2) — To administer sales and manufacturing activities for leading fibre container manufacturer. Will be

responsible for profitable operations of branch plants at New Jersey and Ohio locations. College graduate preferred with sales, manufacturing and general management experience in paper converting industry. Excellent salary plus profit participation. Write full details covering age, education, experience and present compensation. Confidential. Reply Box 410, Modern Packaging.

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MECHANICAL ENGINEER — Family man preferred, Experienced in metal stampings and framing. Knowledge of die and tool design for high speed automatic equipment as well as production development. Metropolitan New York area. Write full details including age. Reply Box 415, Modern Packaging.

POLYETHYLENE SALESMAN AND REP-RESENTATIVE. To handle quality line of polyethylene bags, drum and box liners. All territories open, commission basis. Kobi Bag, 169 Franklin Ave., Brooklyn, New York, Mrs. Gottlieb.

WANTED: SALES REPRESENTATIVES for Leefoam, a unique new high-density polyurethane cushioning material which will be shown at the National Packaging Exposition of the cushioning field having allief lines and the cushioning field having allief lines and presently selling to the aircraft and electronics industries. Our products have wide acceptance throughout New England and we want to expand into other territories. Write to Leewood Corporation, 900 Lawrence Street, Lowell, Massachusetts, or visit us in Booth 282 at the Exposition, April 10-13, Exposition Center, Chicago.

INTERNATIONAL HOUSE of pharmaceutical and cosmetic specialties offers interesting job to a packaging designer. Wanted: creativeness, artistic skill, technical knowhow. People with experience in this field apply to J 80563 Q, Publicitas, Basle/Switzerland.

ARTIST, LABEL DESIGN—Artist to assume responsibility for typography, keylining and original production of several thousand product labels in broad new re-packaging program. Experience in design and type selection rather than illustration will qualify candidates. Preferably around 30

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EMPLOYMENT

THOROUGHLY EXPERIENCED MANneeded to handie all estimates for folding
cartons. Essential that man know technicalities of folding carton production. Relocation to company's home office necessary. Salary open based upon previous
experience. Reply to: Mr. Edward Ashworth,
personnel Manager, Stecher-Traung Lithograph Corporation, 274 North Goodman
Street, Rochester 7, New York.

MANUFACTURERS' REPRESENTATIVE— Wanted for sales of Thermoforming, Ex-pandable Styrene, Die Cutting and Blister Packaging Equipment. Opening for ex-perienced men. Send complete information to Box No. 418, Modern Packaging.

PROGRESSIVE INJECTION MOLDER—has an opening for alert, aggressive representative to handle a brand new patented plastic box line absolutely different from anything on the market. Liberal commission and guaranteed territory. Send all particulars to Box 420, Modern Packaging.

Situations Wanted

ADHESIVE ENGINEER—20 years experience Promotional Sales and service to the Packaging, Laminating and Coating Industry. Market Survey and Development of Industrial Adhesives in the Fields of Paper, Foil, Film, Board and Glass. B.S. Degree in Marketing, will relocate. Reply to Box No. 408, Modern Packaging.

PACKAGING REPRESENTATIVE—Sales experience in printing of papers, films and foils and combinations thereof for the packaging field. Interested in Kentucky, Ohio and Indiana areas. Interviews can be arranged for the April Packaging Show in Chicago. Reply Box 411, Modern Packaging.

EXTENSIVE BACKGROUND SERVICE and installation packaging and wrapping machinery, mechanical inspection and quality control, test and development laboratory work. Seeking connection packaging field Arizona or California, in packaging operation, service or development of equipment or materials, liaison between engineering-manufacturing-sales. Some travel OK. Reply Box 412, Modern Packaging.

PACKAGING ENGINEER with 10 years ex-perience in all phases of packaging and 3 years experience in sales of plastic products desires to represent foam manufacturers and fabricators, blow molders, thermoformers, and allied products in western and central New York State. Reply Box 416, Modern Packaging.

Miscellaneous

WANTED — COMPANY WITH \$500,000 or more tax loss carry forward—reply to Box No. 413, Modern Packaging.

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Hair Colors	Skin Lotions	
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lodine	Stop Leak	
Lighter Fluid	Vitamins	
Liquid	Whiskey	
Sweetener	Wine	

Submit samples of your containers (filled and labeled) plus your approximate production requirements and we will supply you with detailed recommendations and quotations on the machine best suited for your needs. You are not obligated in any way.

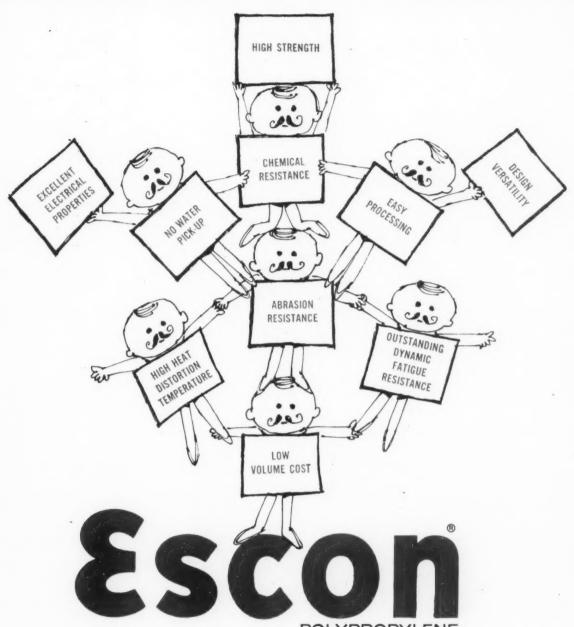
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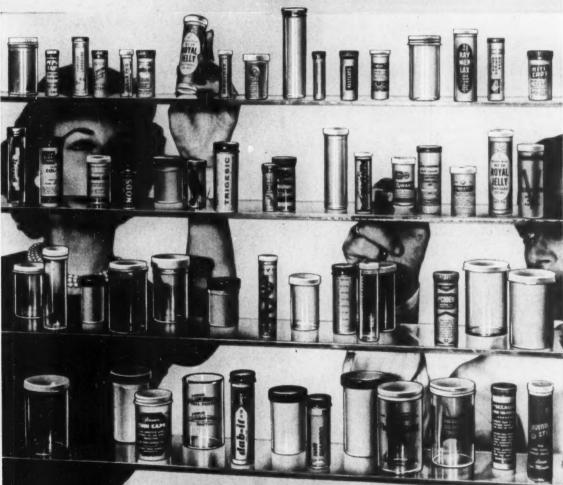
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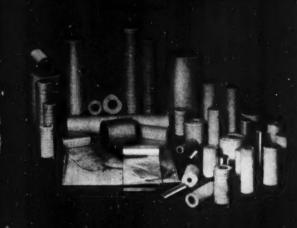
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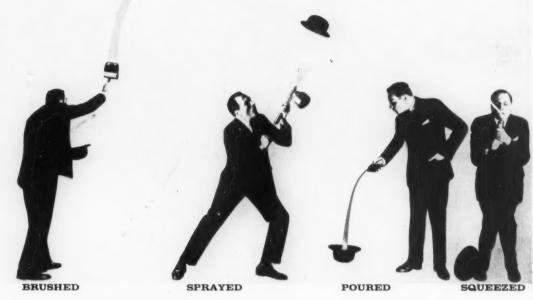


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